

Compilation of Records of Surface Waters of the United States, October 1950 to September 1960

Part 2-A. South Atlantic Slope Basins,
James River to Savannah River

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1723



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Prepared under the direction of E. L. HENDRICKS, Chief, Surface Water Branch

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UNITED STATES DEPARTMENT OF THE INTERIOR

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PREFACE

This report contains summaries of streamflow records in the South Atlantic slope basins, James River to Savannah River. It was prepared by the United States Geological Survey in the Water Resources Division, L. B. Leopold, chief, under the general direction of E. L. Hendricks, chief, Surface Water Branch, and F. J. Flynn, chief, Reports Section.

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COMPILATION OF RECORDS OF SURFACE WATERS OF SOUTH ATLANTIC SLOPE BASINS,
JAMES RIVER TO SAVANNAH RIVER, 1951-60

PURPOSE AND SCOPE

This volume is one of a series of reports presenting monthly and yearly summaries of streamflow and reservoir data collected by the Geological Survey during the period October 1, 1950, to September 30, 1960. Included with these data are some records furnished by other Federal, State, and private agencies. This series of reports is a condensation of the detailed streamflow information presented in the annual series of reports known as "Surface Water Supply of the United States" for each of the years 1951 through 1960. The area covered by this report is the South Atlantic slope basins, James River to Savannah River.

The purpose of the present series of reports is to make available in summarized form all of the surface-water records collected October 1, 1950, to September 30, 1960, and to continue the series of reports known as Water-Supply Papers 1301-19 and 1372 which summarized all surface-water records through September 30, 1950. The present series of reports includes corrections of errors which have been found in the earlier series. Also included are some records collected prior to October 1, 1950, that were omitted from the 1950 compilation series.

The Geological Survey collected the records mainly in cooperation with State, municipal, and other Federal agencies, and published them in detail in the series of annual reports known as "Surface Water Supply of the United States." Some records furnished by other agencies have been included in the annual reports and in the present series of reports; such records are identified in the station description.

The data presented consist of records of discharge of streams and contents of reservoirs summarized on a monthly and yearly basis. Results of miscellaneous discharge measurements and, in general, stage records have been excluded. Included is a map of the area showing the location of each station (pl. 1). The reports of the present series are generally similar in the type of data they contain and in the form of presentation; moreover, they conform in style with the earlier series of compilation reports so that the entire record for any station up to September 30, 1960, is available in one or two volumes.

All records compiled for these summary reports were examined for major errors. A few revisions were made and the revised figures, noted as such, are included. Some previously unpublished information is included, as well as a few estimates of discharge that were made to fill short gaps in an otherwise complete period of record.

DESCRIPTION OF DATA

The gaging-station records are arranged in downstream order. The order used in this report is the same as that adopted for use in the annual series of reports on surface-water supply beginning with the water year 1951. In a downstream direction along the main stem, all stations on a tributary entering above a main-stem station are listed before that station. If a tributary enters between two main-stem stations, it is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. To indicate the rank of any tributary on which a gaging

station is situated and the stream to which it is immediately tributary, each indention in the listing of gaging stations in the table of contents represents one rank. This downstream order and system of indention show which gaging stations are on tributaries between any two stations on a main stem and the rank of the tributary on which each gaging station is situated.

As an added means of identification, each station was assigned a number which is shown on the index map and which is a part of the station name in the heading of the description in the text. The numbers are assigned in downstream order in each part (see explanation of "parts" under the heading "Publications," p. 4) beginning with the most upstream station. The numbers are not consecutive because gaps are left to allow for new stations that may be established.

The data presented for most of the gaging stations comprise a description of the station, a table of monthly discharge in cubic feet per second, a table of monthly runoff in inches, and a yearly summary table. The station description gives the name of the river basin, the station number and name, the location, drainage area, records available, types and datums of gages, average discharge, extremes of discharge, general remarks concerning the data, and a credit statement if records were furnished by another agency.

The location of the gaging station and the drainage area are obtained from the best available maps. When more than one site was used during water years 1951-60 and the difference in drainage areas is significant, the area for the latest site is shown first followed by the areas for other sites in chronological order. In some instances drainage-area figures have not been obtained because of the lack of suitable maps or because the boundaries cannot be defined or the effective drainage area determined.

The paragraph "Records available" lists all periods for which there are published records generally equivalent to those at the present site. If equivalent records have been published under another station name, that fact is also noted.

The gage described first is the present gage or the one used most recently. Information is then given in chronological order for all gages used earlier, giving changes in location, type of gage, or datum. The location or datum of all earlier gages is given with reference to the present or most recently used gage. The datum of the gage is the elevation of the zero of the gage above mean sea level. Where information as to datum is not available, the altitude of the gage is given.

The average discharge for a station is the average of all complete water years and is published only if there are five or more complete water years of record. The years used to determine the average are not necessarily consecutive. The average discharge is not published for some stations because of extensive changes in diversion or storage, or other water development, that have occurred upstream.

In general, the momentary maximum and minimum discharges and stages for the entire period of record are published in the "Extremes" paragraph. These are qualified if necessary according to the type of gage used and the completeness of the record. Maximum and minimum discharges at nonrecording gaging stations are qualified as "observed" unless determined from a graph drawn through actual gage heights which approximates the actual hydrograph.

Under "Remarks" information is given on factors which affect the basin runoff characteristics. These include upstream regulation, diversion, and utilization--a history of changes in these items during the period 1951-60 is given when known. Also, references

are made to the records of storage or diversion upstream and to records concerning quality of water, if published.

When discharge records are furnished by another agency, credit is given under "Cooperation."

The streamflow data summarized in this report generally are contained in two monthly tables and one yearly table. The first monthly table is a tabulation of monthly and yearly mean discharges in cubic feet per second. These figures represent discharge passing the station; they are unadjusted for storage or diversion upstream unless otherwise specified under "Remarks" for the individual station. Each monthly figure is the mean flow for the entire month; generally no record for part of a month is tabulated. Likewise, each yearly figure is the mean flow for a full year, and no figure is shown for a partial year. Usually the months are arranged on a water-year basis. Exceptions to this rule are made in connection with seasonal records wherein the months are grouped to give a complete season for each calendar year.

The second monthly table is a tabulation of monthly and yearly runoff in inches. For streams that are subject to considerable regulation, the second table contains the adjusted runoff in inches. The table of runoff in inches is omitted if the data do not represent natural yield without gross error, whether adjusted or unadjusted.

The third table contains a yearly summary of the streamflow data. The column headed "WSP" lists the number of the water-supply paper in which the figures of daily and monthly discharge are published. If a part of the record has been revised and the revision published, then reference is made to both the original report and the one containing the revised record; if the daily discharge record for the entire year has been republished to include the revisions, then only the later report is listed. However, there is no reference in this column for revisions published for the first time in this report as the corresponding revised figures of daily discharge will be published in a water-supply paper which will contain daily records for the period 1961-65. For some stations the third table is omitted; however, the report containing records for any particular year can generally be found by referring to the table given on page 6.

In the third table the momentary maximum discharge for each water year and the date of its occurrence is given if known. For nonrecording gage records, momentary maximums were obtained from graphs drawn through the gage readings. The momentary maximum discharge, however obtained, is not qualified in any way if it is believed to be representative of the absolute maximum for the water year.

The minimum daily discharge for each water year is listed if known. Other data listed in this table are the annual mean discharge and runoff for both the water year and the calendar year. The figures listed for the water year are the same as those given in the yearly columns of the preceding tables. In addition, the annual mean discharge per square mile is listed for the water year. If figures of runoff have been adjusted for regulation or diversion in the preceding table, adjusted figures are listed in the yearly summary table. For a few stations regulation affects monthly figures seriously, but the effect on annual figures is either negligible or can be adequately adjusted for; for these stations the monthly table of runoff in inches is omitted, but the annual runoff is given.

Most canal and diversion records are given in a single table. There are some records for large canals, however, that are published in the same detail as those for streams. Records of reservoirs also are given in a single table which shows the contents at the end of each month.

Revised figures of discharge for water years 1951-60 are not so indicated if they have been published in an annual report, but are noted as "revised" if they have not been published in an annual report. Revised daily figures which have not been published in annual reports will be published in the water-supply paper containing records for water years 1961-65, except for special cases involving only a few figures which are included in this series of reports. Figures that represent corrections of typographical or computational errors whereas no figures of daily discharge have been revised or changed are indicated as "corrected" in this report, except corrected figures of runoff in inches which are not noted if the correction is due solely to a revision of drainage area. Estimates of discharge made to complete months or years for this report are noted as estimates and as "not previously published."

Revisions or corrections of records published in WSP 1303 are included in this report. However, revised figures of runoff in inches or discharge per square mile for records prior to October 1, 1950, resulting solely from a revision of drainage area, are not given. For stations operated during at least part of the period 1951-60, the revisions or corrections are published with the other data for the station; for stations not operated since the end of the 1950 water year, the revisions or corrections are published in a special section at the conclusion of the report.

PUBLICATIONS

This series of reports comprises 20 volumes of water-supply papers (WSP) as numbered below. The "Part" numbers and the areas covered are the same as those used for the annual series of reports on surface-water supply of the United States since 1951. The boundaries of the parts are indicated on figure 1.

Numbers of water-supply papers for 1960 series of compilation reports		
WSP	Part	Area
1721	1-A	North Atlantic slope basins, Maine to Connecticut.
1722	1-B	North Atlantic slope basins, New York to York River.
1723	2-A	South Atlantic slope basins, James River to Savannah River.
1724	2-B	South Atlantic slope and eastern Gulf of Mexico basins, Ogeechee River to Pearl River.
1725	3-A	Ohio River basin except Cumberland and Tennessee River basins.
1726	3-B	Cumberland and Tennessee River basins.
1727	4	St. Lawrence River basin.
1728	5	Hudson Bay and upper Mississippi River basins.
1729	6-A	Missouri River basin above Sioux City, Iowa.
1730	6-B	Missouri River basin below Sioux City, Iowa.
1731	7	Lower Mississippi River basin.
1732	8	Western Gulf of Mexico basins.
1733	9	Colorado River basin.
1734	10	The Great Basin.
1735	11	Pacific slope basins in California.
1736	12	Pacific slope basins in Washington and upper Columbia River basin.
1737	13	Sneke River basin.
1738	14	Pacific slope basins in Oregon and lower Columbia River basin.
1739	-	Hawaii.
1740	-	Alaska.

Records prior to September 30, 1950, were summarized in a series of water-supply papers as listed below. Each of these volumes contains a list of the annual reports from which data prior to 1951 were summarized.

Numbers of water-supply papers for 1950 series of compilation reports					
WSP	Part	WSP	Part	WSP	Part
1301	1-A	1308	5	1315-A	11-B
1302	1-B	1309	6-A	1315-B	11-A
1303	2-A	1310	6-B	1316	12
1304	2-B	1311	7	1317	13
1305	3-A	1312	8	1318	14
1306	3-B	1313	9	1319	Hawaii
1307	4	1314	10	1372	Alaska

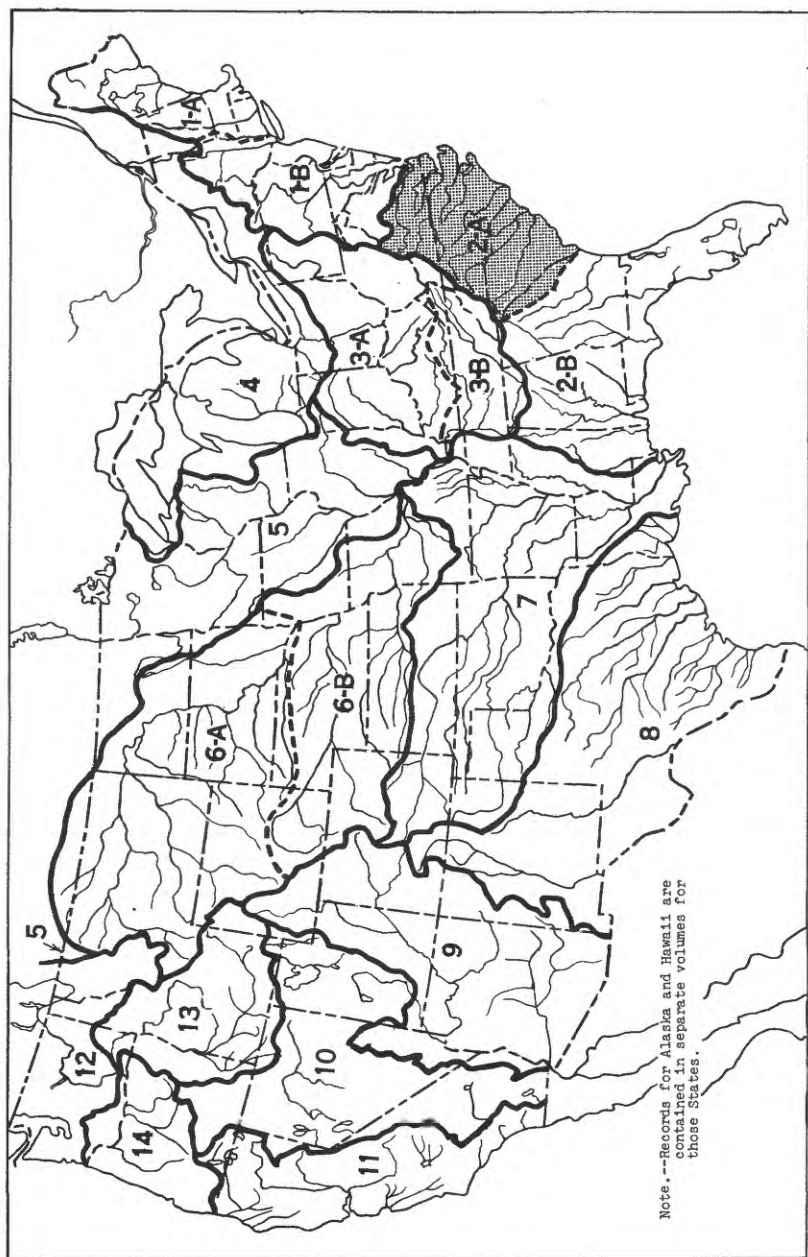


Figure 1.--Map of the conterminous United States showing areas covered by 18 of the 20 volumes on surface water supply. The area covered by this report is shaded.

This report is summarized from the following 10 annual reports which contain records of daily discharge for each of the water years from 1951 to 1960.

Annual water-supply papers, Part 2-A, 1951-60

Water year	WSP	Water year	WSP
1951	1203	1956	1433
1952	1233	1957	1503
1953	1273	1958	1553
1954	1333	1959	1623
1955	1383	1960	1703

In addition to the customary records of discharge collected during the systematic operation of gaging stations there is much additional hydrologic information available, both published and unpublished.

A list of flood reports and other special reports is contained in the introductory pages of each of the annual reports listed above.

Records for many stations have been analyzed by an electronic computer to give: the number of days in each year that the discharge was between selected limits (duration tables); the lowest and highest mean discharges for selected numbers of consecutive days in each year; and other statistical summaries.

Data on low flow or peak flows or both are available for many sites other than gaging stations.

Specific information on unpublished data available can be obtained by writing directly to the district engineer for the State in which the site or gaging station is located.

HYDROLOGIC CONDITIONS

Streamflow, a residual of precipitation after other demands have been met, varies considerably from year to year and from place to place. Figure 2 shows yearly discharge for three gaging stations in South Atlantic slope basins, James River to Savannah River. The pattern of yearly runoff shown by these streams is generally representative of hydrologic conditions in their parts of the report area.

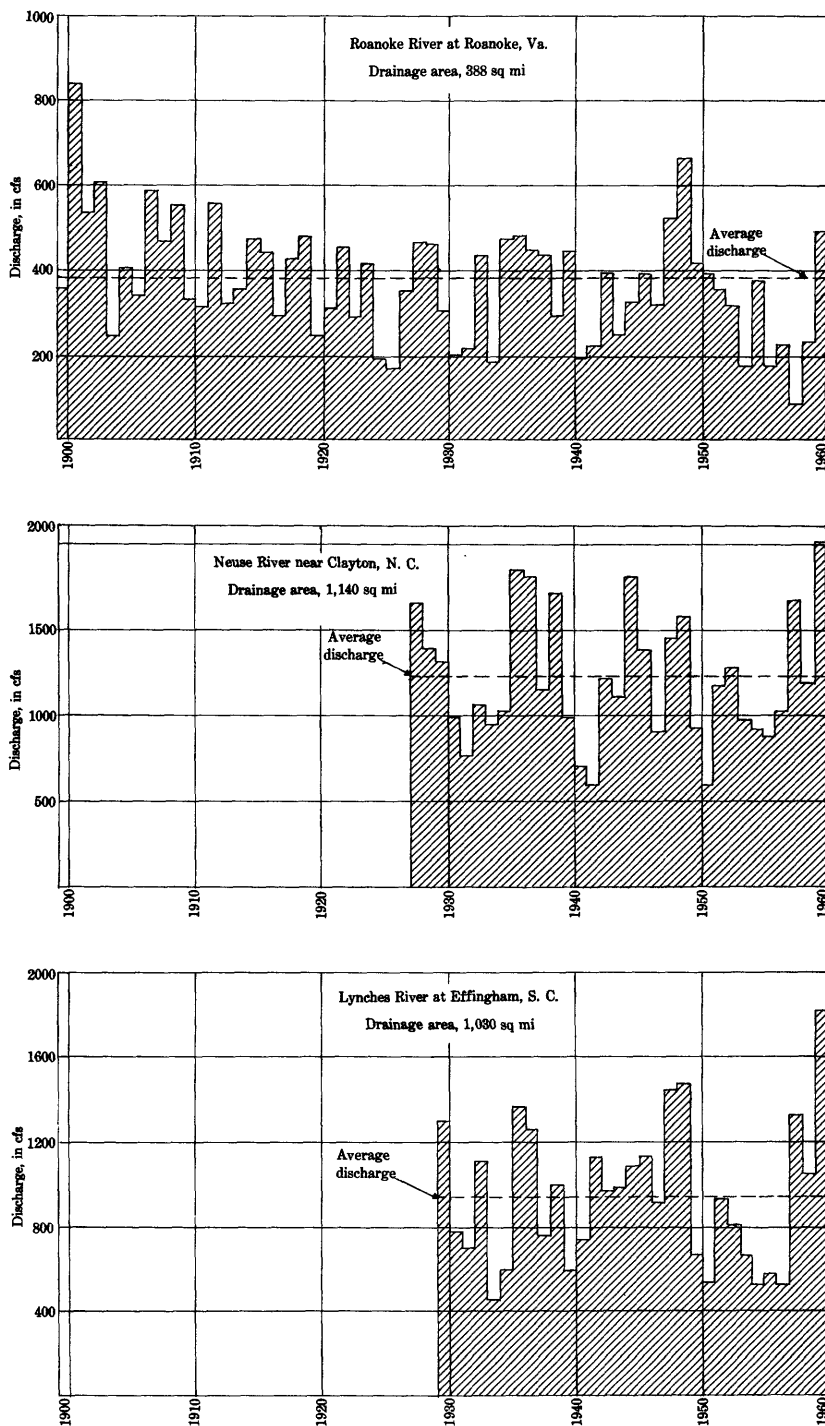


Figure 2.—Yearly discharge at three representative gaging stations.

GAGING-STATION RECORDS

JAMES RIVER BASIN

115. Back Creek near Mountain Grove, Va.

Location--Lat 38°04'10", long 79°53'50", on left bank 0.4 mile downstream from Cummings Run, 0.9 mile downstream from bridge on State Highway 39, and 2.1 miles south of Mountain Grove, Bath County.

Drainage area--131 sq mi.

Records available--October 1951 to September 1960.

Gage--Water-stage recorder. Altitude of gage is 1,707 ft above mean sea level (by barometer).

Average discharge--9 years (1951-60), 167 cfs.

Extremes--1951-60: Maximum discharge, 8,750 cfs Oct. 15, 1954 (gage height, 9.35 ft); from rating curve extended above 4,000 cfs on basis of three slope-area measurements of peak flow; minimum, 2.4 cfs Sept. 3, 4, 1953; minimum gage height, 1.72 ft Jan. 6, 25, 1956, result of freezeup.

Cooperation--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	250	-	-	-	-	-	-	-	-
1952	8.06	28.6	219	573	250	495	281	515	41.9	17.6	24.8	16.1	190
1953	11.3	24.4	106	323	466	474	215	128	52.8	21.5	8.06	6.50	151
1954	7.21	10.4	55.0	177	117	532	241	161	125	196	45.4	18.4	141
1955	222	214	396	143	511	782	160	120	37.3	13.1	22.0	12.2	218
1956	8.03	14.0	17.2	24.8	360	302	283	84.7	145	94.6	51.0	20.3	116
1957	36.6	62.2	192	348	481	204	457	117	170	65.9	12.8	22.0	178
1958	42.0	94.4	351	219	209	349	561	328	35.0	31.4	65.9	19.4	192
1959	9.37	13.8	21.7	99.4	114	253	390	238	192	29.1	24.6	14.4	116
1960	103	166	260	248	304	432	407	348	89.2	24.0	23.2	52.3	204

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	0.07	0.24	1.92	5.04	2.06	4.36	2.40	2.77	0.36	0.15	0.22	0.14	19.73
1953	.10	.21	.93	2.85	3.71	4.17	1.83	1.13	.45	.19	.07	.06	15.70
1954	.06	.09	.47	1.56	.93	4.68	2.05	1.42	1.06	1.73	.40	.16	14.61
1955	1.95	1.82	3.44	1.26	4.06	6.88	1.36	1.06	.32	.12	.19	.10	22.56
1956	.07	.12	.15	.22	2.97	2.66	2.41	.75	1.24	.83	.45	.17	12.04
1957	.32	.53	1.70	3.07	3.82	1.80	3.89	1.03	1.45	.58	.11	.19	18.49
1958	.37	.80	3.09	1.92	1.67	3.07	4.78	2.88	.30	.28	.58	.17	19.91
1959	.08	.12	.19	.88	.91	2.22	3.32	2.10	1.64	.26	.22	.12	12.06
1960	.91	1.42	2.28	2.18	2.50	3.80	3.47	3.07	.76	.21	.20	.45	21.25

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	1233	7,110	Mar. 11, 1952	7.2	190	1.45	19.73	180	18.74
1953	1273	7,800	Feb. 21, 1953	2.8	151	1.15	15.70	145	15.08
1954	1333	7,790	Mar. 1, 1954	4.7	141	1.08	14.61	205	21.20
1955	1383	8,750	Oct. 15, 1954	5.4	218	1.66	22.56	151	15.69
1956	1433	1,850	Mar. 14, 1956	5.8	118	.885	12.04	137	14.25
1957	1503	4,170	Apr. 5, 1957	6.0	178	1.36	18.49	195	20.20
1958	(a)	3,110	Dec. 26, 1957	12	192	1.47	19.91	155	16.04
1959	(a)	3,300	June 2, 1959	4.7	116	.885	12.06	157	16.28
1960	(a)	5,510	Mar. 30, 1960	8.0	204	1.56	21.25	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

120. Falling Springs Creek near Falling Spring, Va.

Location.--Lat 37°52'05", long 79°56'45", on right bank 50 ft downstream from bridge on U.S. Highway 220, 0.7 mile downstream from Falling Spring (the main source), 2.1 miles southeast of town of Falling Spring, Alleghany County, and 5 miles northeast of Covington.

Records available.--November 1947 to September 1952 (fragmentary prior to March 1948).

Gage.--Water-stage recorder and concrete control. Altitude of gage is 2,150 ft (from topographic map).

Extremes.--1948-52: Maximum discharge, 519 cfs Dec. 7, 1950; maximum gage height, 3.0 ft Feb. 14, 1948, from recorded range in stage; minimum discharge, 3.5 cfs Aug. 7, 1950 (gage height, 0.30 ft); minimum daily, 5.5 cfs Sept. 18, 1951, Sept. 24, 25, 27, 28, 1952.

Remarks.--Regulation at low flow by cress beds 2,000 to 3,000 ft above station prior to August 1951.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10.1	7.70	40.8	13.2	34.2	34.7	46.8	16.4	35.2	14.9	8.67	6.74	22.3
1952	6.59	6.24	12.7	31.8	32.3	37.1	24.5	22.5	10.5	7.72	6.97	6.63	17.1

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	20.6	-
1951	1203	519	Dec. 7, 1950	5.5	22.3	-	-	19.5	-
1952	1233	197	Mar. 11, 1952	5.5	17.1	-	-	-	-

JAMES RIVER BASIN

125. Jackson River at Falling Spring, Va.

Location.--Lat 37°52'36", long 79°58'39", on right bank 20 ft upstream from Smith Bridge, 0.8 mile south of town of Falling Spring, Alleghany County, 1.6 miles downstream from Falling Springs Creek, and 5.5 miles north of Covington.

Drainage area.--409 sq mi.

Records available.--April 1925 to September 1960. Prior to October 1934, published as "at Barber."

Gage.--Water-stage recorder. Datum of gage is 1,333.49 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 26, 1934, chain gage at same site and datum.

Average discharge.--35 years (1925-60), 482 cfs.

Extremes.--1925-60: Maximum discharge, 24,700 cfs Mar. 17, 1936 (gage height, 14.74 ft), from rating curve extended above 13,000 cfs on basis of records for other stations in James River basin; minimum, 36 cfs Oct. 12, 1946, cause unknown; minimum daily, 58 cfs Sept. 28-30, Oct. 1, 3, 5, 1930.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	172	277	1,340	600	1,450	1,152	1,517	444	793	207	131	98.3	676
1952	98.0	143	550	1,273	775	1,240	724	798	185	115	125	109	512
1953	96.8	130	284	709	1,153	1,277	561	333	188	116	83.0	97.4	415
1954	77.1	82.2	192	440	285	1,210	592	404	301	399	145	92.2	353
1955	555	499	878	444	1,140	2,085	532	324	152	109	149	103	579
1956	87.2	91.2	101	105	814	747	743	256	311	216	164	106	309
1957	143	209	423	734	1,260	628	1,266	375	493	207	107	135	492
1958	175	286	803	602	702	1,003	1,451	954	194	195	323	134	568
1959	93.6	100	115	265	206	638	996	583	560	135	152	116	336
1960	369	456	638	613	860	1,137	1,239	994	357	129	143	197	593

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.48	0.76	3.78	1.70	3.70	3.25	4.14	1.26	2.16	0.58	0.37	0.27	22.45
1952	.28	.39	1.54	3.58	2.04	3.49	1.98	2.25	.50	.32	.35	.30	17.02
1953	.27	.35	.80	1.99	2.94	3.60	1.53	.94	.51	.33	.23	.27	15.76
1954	.22	.22	.54	1.24	.73	3.41	1.62	1.14	.82	1.13	.41	.25	11.73
1955	1.57	1.56	2.48	1.28	2.90	5.68	1.45	.91	.42	.31	.42	.28	19.24
1956	.25	.25	.28	.30	2.15	2.11	2.03	.72	.85	.61	.46	.29	10.30
1957	.40	.57	1.19	2.06	3.21	1.78	3.46	1.07	1.35	.58	.30	.37	16.34
1958	.49	.78	2.26	1.70	1.79	2.82	3.96	2.69	.53	.55	.91	.37	18.85
1959	.26	.27	.32	.75	.73	1.80	2.72	1.64	1.53	.38	.43	.32	11.15
1960	1.04	1.24	1.80	1.73	2.27	3.20	3.38	2.80	.97	.36	.40	.54	19.73

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	603	20.02
1951	1203	17,600	Dec. 8, 1950	65	676	1.65	22.45	591	19.64
1952	1233	11,600	Mar. 11, 1952	88	512	1.25	17.02	488	16.23
1953	1273	15,500	Feb. 21, 1953	64	415	1.01	13.76	402	13.32
1954	1333	12,600	Mar. 1, 1954	70	353	.863	11.73	466	16.16
1955	1363	13,700	Oct. 16, 1954	76	579	1.42	19.24	440	14.61
1956	1433	3,600	Mar. 15, 1956	68	309	.756	10.30	351	11.68
1957	1503	10,900	Apr. 5, 1957	77	492	1.20	16.34	533	17.71
1958	1553	6,080	Dec. 26, 1957	107	568	1.39	18.85	487	16.17
1959	1623	6,440	June 3, 1959	75	336	.822	11.15	433	14.58
1960	1703	12,100	Mar. 30, 1960	97	593	1.45	19.73	-	-

130. Dunlap Creek near Covington, Va.

Location.--Lat 37°48'10", long 80°02'50", on right bank 20 ft downstream from bridge on U.S. Highway 60, 2.2 miles downstream from Ogle Creek, and 3.0 miles west of Covington, Alleghany County.

Drainage area.--166 sq mi.

Records available.--October 1928 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 1,294.21 ft above mean sea level (levels by Corps of Engineers). Prior to Dec. 8, 1949, chain gage at same site and datum.

Average discharge.--32 years (1928-60), 159 cfs.

Extremes.--1928-60: Maximum discharge, 8,370 cfs Mar. 17, 1936 (gage height, 10.52 ft, from floodmarks), from rating curve extended above 4,500 cfs on basis of velocity-area studies and records for other stations in James River basin; minimum, 6.7 cfs Aug. 31, Sept. 2, 1957.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	30.9	50.0	331.	96.0	416	491	575	127	280	39.5	20.9	20.0	204
1952	20.2	28.6	128*	403	250	497	260	194	35.7	20.9	31.6	23.7	158
1953	20.8	29.4	73.0	189	365	431	192	138	34.0	20.0	14.8	18.0	126
1954	15.0	17.7	41.6	173	66.5	400	237	246	47.3	166	29.0	19.0	122
1955	143	94.4	299	132	468	935	145	61.0	35.6	31.2	46.5	19.0	200
1956	18.7	21.6	21.5	30.6	343	316	322	106	51.9	31.2	19.9	23.1	108
1957	51.2	108	112	346	558	257	443	143	114	25.4	18.7	101	187
1958	61.9	130	278	235	357	582	529	395	46.7	95.4	145	27.4	240
1959	24.1	22.7	41.9	115	96.0	237	420	103	79.9	24.3	29.2	21.9	101
1960	59.1	98.7	176	130	299	476	393	271	65.9	26.5	22.6	37.8	171

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.21	0.34	2.29	0.67	2.61	3.41	3.86	0.88	1.89	0.27	0.15	0.13	16.71
1952	.14	.19	.89	2.80	1.63	3.45	1.75	1.35	.24	.15	.22	.16	12.97
1953	.14	.20	.51	1.31	2.29	3.00	1.29	.96	.23	.14	.10	.12	10.29
1954	.10	.12	.29	1.20	.42	2.78	1.60	1.71	.32	1.15	.20	.13	10.02
1955	.99	.63	2.08	.92	2.94	6.49	.97	.42	.24	.22	.32	.13	16.35
1956	.13	.14	.15	.21	2.23	2.19	2.16	.74	.35	.22	.14	.16	8.82
1957	.36	.73	.78	2.40	3.50	1.79	2.98	.99	.77	.18	.13	.68	15.29
1958	.43	.87	1.92	1.64	2.24	4.05	3.56	2.74	.31	.65	1.01	.18	19.60
1959	.17	.15	.29	.80	.60	1.65	2.82	.71	.54	.17	.20	.15	8.25
1960	.41	.66	1.22	.90	1.94	3.31	2.64	1.88	.44	.18	.16	.25	13.99

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1950	-	-	-	-	-	-	-	174	14.25	-	-
1951	1203	5,570	Mar. 30, 1951	16	204	1.23	16.71	185	15.09	-	-
1952	1233	5,700	Mar. 11, 1952	15	158	.952	12.97	153	12.60	-	-
1953	1273	3,720	Feb. 21, 1953	12	126	.759	10.29	122	9.95	-	-
1954	1333	7,770	Mar. 1, 1954	12	122	.735	10.02	161	13.21	-	-
1955	1383	7,770	Mar. 6, 1955	16	200	1.20	16.35	160	13.07	-	-
1956	1433	2,560	Mar. 14, 1956	13	108	.651	8.82	125	10.27	-	-
1957	1503	5,440	Apr. 5, 1957	13	187	1.13	15.29	203	16.64	-	-
1958	1553	5,570	Mar. 31, 1958	21	240	1.45	19.60	208	16.99	-	-
1959	1623	2,850	Apr. 12, 1959	15	101	.608	8.25	122	9.93	-	-
1960	1703	3,320	Mar. 30, 1960	15	171	1.03	13.99	-	-	-	-

JAMES RIVER BASIN

140. Potts Creek near Covington, Va.

Location.--Lat 37°44'10", long 80°01'55", near center of span on downstream side of highway bridge, 0.2 mile upstream from Hays Creek and 3.2 miles southwest of Covington, Alleghany County.

Drainage area.--158 sq mi.

Records available.--October 1928 to September 1956. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Wire-weight gage, and since Mar. 16, 1950, crest-stage gage. Datum of gage is 1,259.23 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 1, 1954, chain gage at site 80 ft downstream at same datum.

Average discharge.--28 years (1928-56), 173 cfs.

Extremes.--1928-56: Maximum discharge observed, 7,510 cfs (revised) Jan. 23, 1935 (gage height, 10.10 ft), from rating curve extended above 3,600 cfs on basis of conveyance studies; minimum, 13 cfs Nov. 29, 1930; minimum gage height, 1.03 ft Sept. 6, 1954.

Revisions.--Revised records for the water years 1935, 1936, 1940, 1942, 1948, and 1949, superseding those published in WSP 1303, are given herewith:

Jan. 23, 1935..... 5,530 cfs

Month	Mean	Per square mile	Runoff in inches	Momentary maximum	
				Discharge (cfs)	Date
January 1935.....	606	3.84	4.42	-	-
Water year 1934-35.....	292	1.85	25.07	7,510	Jan. 23, 1935
Calendar year 1935.....	251	1.59	21.58	-	-
Water year 1935-36.....	-	-	-	6,850	Mar. 17, 1936
Water year 1939-40.....	-	-	-	5,090	Aug. 14, 1940
Water year 1941-42.....	-	-	-	5,860	May 16, 1942
Water year 1947-48.....	-	-	-	85,480	Feb. 14, 1948
Water year 1948-49.....	-	-	-	6,630	Apr. 13, 1949

a Figure originally published in WSP 1112.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	61.3	95.9	476	105	416	532	594	139	347	82.8	37.5	37.6	242
1952	31.5	46.6	167	445	321	597	323	242	66.8	38.5	43.3	43.9	197
1953	32.0	63.7	138	225	441	515	203	224	85.9	41.4	27.5	27.4	167
1954	21.8	29.5	46.7	168	91.4	414	196	185	56.8	214	68.5	28.4	128
1955	157	98.1	292	155	500	1,078	216	78.5	55.2	35.5	78.3	51.6	230
1956	27.5	29.7	35.3	29.8	270	286	345	103	62.1	48.7	29.7	74.2	110
1957	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.45	0.68	3.47	0.77	2.74	3.88	4.20	1.02	2.46	0.60	0.27	0.26	20.80
1952	.23	.33	1.22	3.25	2.19	4.36	2.28	1.76	.47	.28	.32	.31	17.00
1953	.23	.45	1.01	1.64	2.90	3.76	1.43	1.64	.61	.30	.20	.19	14.36
1954	.16	.21	.34	1.22	.60	3.02	1.38	1.35	.40	1.56	.50	.20	10.94
1955	1.15	.69	2.13	1.13	3.29	7.86	1.53	.57	.39	.26	.57	.22	19.79
1956	.20	.21	.24	.22	1.84	2.09	2.43	.75	.44	.36	.22	.52	9.52
1957	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Discharge	Momentary maximum	Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
1950	-	-	-	-	-	-	-	199	17.11
1951	1203	*5,970	Dec. 7, 1950	28	242	1.53	20.80	209	17.98
1952	1233	*6,410	Mar. 11, 1952	28	197	1.25	17.00	196	16.94
1953	1273	5,030	Mar. 24, 1953	20	167	1.06	14.36	156	13.38
1954	1333	*7,290	Mar. 1, 1954	19	128	.810	10.94	165	14.20
1955	1383	6,460	Mar. 6, 1955	24	230	1.46	19.79	192	16.47
1956	1433	2,000	Apr. 16, 1956	21	110	.696	9.52	-	-
1957	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-

* Revised.

145. Smith Creek above old dam, near Clifton Forge, Va.

Location.--Lat 37°51'10", long 79°50'50", on left abutment of bridge on city of Clifton Forge highway, 0.2 mile upstream from old water-supply dam, 0.8 mile upstream from new water-supply dam, 3.1 miles northwest of Clifton Forge, Alleghany County, and 3.5 miles upstream from mouth.

Drainage area.--12.4 sq mi.

Records available.--May 1947 to September 1956.

Gage.--Staff gage and since August 1953 crest-stage gage. Altitude of gage is 1,406 ft (by barometer).

Average discharge.--9 years (1947-56), 18.3 cfs.

Extremes.--1947-56: Maximum discharge observed, 1,200 cfs Dec. 7, 1950 (gage height, 7.30 ft); minimum, 1.4 cfs July 31, 1952, Aug. 31 to Sept. 3, 1953, and Sept. 16-18, 1954; minimum gage height, 1.05 ft Aug. 29, Sept. 5, 1948.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4.46	4.80	50.9	14.5	40.2	37.0	53.7	16.7	37.4	7.21	3.20	2.45	22.5
1952	2.66	4.17	16.9	40.2	29.3	45.1	33.1	26.1	5.92	2.55	3.05	2.77	17.7
1953	2.38	5.40	12.3	25.0	37.1	47.8	26.7	13.1	5.42	2.86	2.25	1.92	15.1
1954	2.48	2.96	6.45	14.6	15.8	36.0	29.4	15.3	3.85	2.28	1.98	1.69	11.0
1955	7.86	14.8	24.5	14.1	36.7	59.1	24.7	6.95	4.52	3.22	3.74	2.65	16.8
1956	2.15	3.23	3.66	4.84	34.8	30.5	27.0	10.8	14.9	4.06	3.52	2.41	11.7
1957	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.42	0.43	4.73	1.35	3.37	3.44	4.83	1.56	3.37	0.67	0.30	0.22	24.69
1952	.25	.37	1.57	3.74	2.54	4.20	2.98	2.42	.53	.24	.28	.25	19.37
1953	.22	.49	1.14	2.33	3.11	4.44	2.40	1.22	.49	.27	.21	.17	16.49
1954	.23	.27	.60	1.36	1.32	3.34	2.64	1.42	.35	.21	.18	.15	12.07
1955	.73	1.33	2.28	1.31	3.08	5.50	2.22	.65	.41	.30	.35	.24	18.40
1956	.20	.29	.34	.45	3.03	2.84	2.43	1.00	1.34	.38	.33	.22	12.85
1957	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	20.4	22.35
1951	1205	al, 200	Dec. 7, 1950	1.7	22.5	1.81	24.69	19.4	21.30
1952	1233	447	Mar. 11, 1952	1.5	17.7	1.43	19.37	17.3	19.03
1953	1273	752	Mar. 24, 1953	1.4	15.1	1.22	16.49	14.4	15.74
1954	1333	282	Mar. 1, 1954	1.4	11.0	1.887	12.07	14.0	15.31
1955	1383	425	Mar. 6, 1955	1.7	16.8	1.35	18.40	13.6	14.89
1956	1433	155	Mar. 14, 1956	1.8	11.7	.944	12.85	-	-
1957	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-

a Maximum observed.

160. Cowpasture River near Clifton Forge, Va.

Location.--Lat 37°47'30", long 79°45'35", on left bank 100 ft downstream from highway bridge, 2.5 miles upstream from confluence with Jackson River, and 4.0 miles southeast of Clifton Forge, Alleghany County.

Drainage area.--456 sq mi.

Records available.--March 1925 to September 1960. Records for May 1907 to August 1908, published in WSP 242, have been found to be unreliable and should not be used.

Gage.--Water-stage recorder. Datum of gage is 1,006.93 ft above mean sea level (levels by Corps of Engineers). March 1925 to October 1934, chain gage at site 100 ft upstream at present datum.

Average discharge.--35 years (1925-60), 517 cfs.

Extremes.--1925-60: Maximum discharge, 34,200 cfs Mar. 18, 1936 (gage height, 18.62 ft), from rating curve extended above 13,000 cfs on basis of records for other stations in James River basin; minimum, 38 cfs Sept. 2, 1932 (gage height, 1.70 ft).

Flood in March 1913 reached a stage of 20.8 ft, from floodmarks (discharge, about 45,000 cfs), from rating curve extended above 13,000 cfs on basis of records for other stations in James River basin.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	172	272	1,395	508	1,525	1,157	1,585	476	1,199	271	177	118	731
1952	99.2	168	611	1,600	876	1,472	1,118	778	187	116	211	154	617
1953	112	232	485	863	1,313	1,535	580	436	230	147	96.6	77.7	505
1954	77.9	88.7	260	466	456	1,324	711	431	229	219	106	77.3	371
1955	550	459	869	429	1,014	2,019	583	276	234	126	245	112	575
1956	89.8	99.4	99.4	103	808	789	695	214	222	110	93.3	101	282
1957	138	143	291	575	1,263	727	1,315	440	498	182	83.6	244	485
1958	200	382	874	668	760	1,143	1,587	985	233	210	271	120	619
1959	90.6	87.6	158	325	282	611	1,042	520	731	162	116	158	356
1960	537	459	669	573	1,018	1,189	1,188	1,223	440	130	139	199	646

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.43	0.66	3.53	1.28	3.48	2.93	3.88	1.20	2.93	0.68	0.45	0.29	21.74
1952	.25	.41	1.54	4.05	2.07	3.72	2.73	1.97	.46	.29	.53	.38	18.40
1953	.28	.57	1.22	2.18	3.00	3.88	1.42	1.10	.56	.37	.24	.19	15.01
1954	.20	.22	.66	1.18	1.04	3.34	1.74	1.09	.56	.55	.27	.19	11.04
1955	1.40	1.13	2.20	1.08	2.31	5.11	1.43	.70	.57	.32	.62	.27	17.14
1956	.23	.24	.25	.26	1.91	1.99	1.70	.54	.54	.28	.24	.25	8.43
1957	.35	.35	.74	1.45	2.88	1.83	3.21	1.11	1.22	.46	.21	.60	14.41
1958	.51	.94	2.21	1.68	1.74	2.89	3.88	2.49	1.57	.53	.68	.29	18.41
1959	.23	.21	.40	.82	.64	1.54	2.55	1.32	1.79	.41	.29	.39	10.59
1960	1.36	1.12	1.69	1.45	2.41	3.01	2.91	3.09	1.08	.33	.35	.49	19.29

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	620	18.47
1951	1203	13,400	June 13, 1951	85	731	1.60	21.74	649	19.32
1952	1233	13,900	Mar. 12, 1952	98	617	1.35	18.40	612	18.27
1953	1273	14,800	Feb. 22, 1953	60	505	1.11	15.01	471	14.02
1954	1333	12,100	Mar. 2, 1954	65	371	.814	11.04	493	14.69
1955	1383	11,600	Mar. 6, 1955	69	575	1.26	17.14	441	13.13
1956	1433	4,350	Mar. 15, 1956	60	282	.618	8.43	306	9.15
1957	1503	12,500	Apr. 6, 1957	54	485	1.08	14.41	559	16.63
1958	1553	5,850	Apr. 1, 1958	93	619	1.36	18.41	525	15.59
1959	1623	9,950	June 3, 1959	58	358	.781	10.59	468	13.32
1960	1703	11,100	Mar. 31, 1960	87	646	1.42	19.29	-	-

165. James River at Lick Run, Va.

Location--Lat 37°46'25", long 79°47'05", on right bank 10 ft downstream from old highway bridge at Lick Run, Botetourt County, 1,000 ft downstream from bridge on U.S. Highway 220, 0.9 mile downstream from confluence of Cowpasture and Jackson Rivers, 1.8 miles south of Iron Gate, and at mile 338.9.

Drainage area--1,369 sq mi.

Records available--April 1925 to September 1960.

Gage--Water-stage recorder. Datum of gage is 978.30 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 26, 1928, chain gage at same site and datum.

Average discharge--35 years (1925-60), 1,580 cfs.

Extremes--1925-60: Maximum discharge, 66,600 cfs Mar. 18, 1936 (gage height, 25.65 ft), from rating curve extended above 37,000 cfs on basis of records for other stations in James River basin; minimum, 153 cfs Oct. 11, 1930.

Flood in November 1877 reached a stage of about 33 ft (discharge, about 120,000 cfs). Flood in March 1913 reached a stage of 30.4 ft, from floodmarks (discharge, about 98,000 cfs).

Cooperation--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	509	834	4,342	1,538	4,344	3,840	4,970	1,451	3,188	727	422	329	2,189
1952	299	452	1,759	4,487	2,811	4,710	2,975	2,580	625	543	530	402	1,832
1953	304	575	1,254	2,441	3,961	4,649	1,953	1,399	641	586	254	253	1,490
1954	217	243	650	1,481	1,192	4,162	2,216	1,618	830	1,054	356	246	1,192
1955	1,768	1,458	2,808	1,502	3,764	7,421	1,800	816	551	340	619	289	1,923
1956	247	281	279	291	2,743	2,592	2,450	736	725	429	329	318	942
1957	511	683	1,050	2,383	4,625	2,351	4,282	1,425	1,395	492	274	972	1,678
1958	634	1,259	2,656	2,183	2,537	3,905	5,307	3,392	621	679	1,100	349	2,049
1959	268	285	428	920	848	2,041	3,614	1,457	1,613	388	348	368	1,045
1960	1,326	1,401	2,140	1,733	3,257	3,987	4,099	3,421	1,183	367	369	561	1,982

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.43	0.68	3.66	1.29	3.30	3.23	4.05	1.22	2.60	0.61	0.36	0.27	21.70
1952	.25	.37	1.48	3.78	2.21	3.97	2.42	2.16	.51	.29	.45	.33	18.22
1953	.26	.47	1.06	2.05	3.01	3.92	1.60	1.18	.52	.33	.21	.21	14.82
1954	.18	.20	.55	1.24	.91	3.50	1.81	1.36	.68	.89	.30	.20	11.82
1955	1.49	1.19	2.36	1.27	2.86	6.25	1.46	.69	.45	.29	.52	.24	19.07
1956	.21	.23	.24	.25	2.16	2.18	2.00	.62	.59	.36	.28	.26	9.38
1957	.43	.56	.88	2.01	3.52	1.98	3.49	1.20	1.14	.41	.23	.79	16.64
1958	.53	1.03	2.24	1.83	1.93	3.29	4.33	2.86	.51	.57	.93	.28	20.33
1959	.23	.23	.36	.77	.64	1.72	2.94	1.22	1.32	.33	.29	.30	10.35
1960	1.12	1.14	1.80	1.46	2.57	3.36	3.34	2.88	.96	.31	.31	.46	19.71

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,939	19.23
1951	1203	38,300	Dec. 8, 1950	276	2,189	1.60	21.70	1,920	19.03
1952	1233	34,300	Mar. 12, 1952	261	1,832	1.34	18.22	1,800	17.91
1953	1273	38,900	Feb. 22, 1953	180	1,490	1.09	14.82	1,405	13.96
1954	1333	33,400	Mar. 2, 1954	180	1,192	.871	11.82	1,607	15.93
1955	1383	35,500	Mar. 6, 1955	208	1,923	1.40	19.07	1,482	14.71
1956	1433	13,300	Mar. 15, 1956	198	942	.688	9.38	1,063	10.57
1957	1503	35,800	Apr. 6, 1957	200	1,678	1.23	16.64	1,872	18.57
1958	(a)	22,500	Mar. 31, 1958	274	2,049	1.50	20.33	1,749	17.35
1959	(a)	18,600	June 3, 1959	189	1,045	.763	10.35	1,372	13.59
1960	(a)	35,400	Mar. 31, 1960	250	1,982	1.45	19.71	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

175. Johns Creek at Newcastle, Va.

Location--Lat 37°30'20", long 80°06'25", on right bank 20 ft downstream from highway bridge at Newcastle, Craig County, and 1,700 ft upstream from mouth.

Drainage area--106 sq mi.

Records available--April 1926 to September 1960.

Gage--Water-stage recorder. Datum of gage is 1,254.30 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 7, 1937 (corrected), chain gage at same site and datum.

Average discharge--34 years (1926-60), 125 cfs.

Extremes--1926-60: Maximum discharge observed, 8,000 cfs Jan. 23, 1935 (gage height, 10.80 ft), from rating curve extended above 3,000 cfs on basis of velocity-area studies; minimum, 6 cfs Dec. 5, 1946 (gage height, 2.72 ft), result of freezeup; minimum daily, 6.9 cfs Sept. 1, 2, 1957.

Cooperation--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	24.1	40.7	203	59.2	282	370	415	83.2	159	27.8	14.0	15.0	140
1952	14.9	25.0	94.7	238	240	440	237	190	33.0	16.2	24.1	29.0	136
1953	17.8	48.7	104	197	341	428	156	143	40.9	14.9	10.8	11.8	125
1954	11.4	15.1	38.7	119	90.3	267	142	119	42.0	37.5	18.7	11.7	76.2
1955	38.5	32.1	17.6	98.7	355	730	146	41.9	27.2	13.2	22.3	9.42	140
1956	9.85	14.9	16.3	16.2	173.	198	265	61.9	51.0	21.7	11.7	18.8	70.7
1957	54.3	89.1	85.5	266	438	195	353	55.0	68.9	14.6	9.86	140	145
1958	70.7	166	202	207	210	341	451	298	36.9	39.3	26.2	15.1	172
1959	14.1	17.9	47.2	72.5	63.3	137	339	65.1	25.7	12.2	16.3	31.3	69.8
1960	109	152	220	120	330	385	302	181	54.5	14.8	12.4	18.6	158

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.26	0.43	2.21	0.64	2.77	4.02	4.37	0.90	1.67	0.30	0.15	0.16	17.88
1952	.16	.26	1.03	3.14	2.44	4.78	2.50	2.06	.35	.18	.26	.31	17.47
1953	.19	.51	1.13	2.14	3.35	4.66	1.64	1.56	.43	.16	.12	.12	16.01
1954	.12	.16	.42	1.29	.89	2.90	1.50	1.29	.44	.41	.20	.12	9.74
1955	.42	.34	1.91	1.07	3.49	7.94	1.54	.46	.29	.14	.24	.10	17.94
1956	.11	.16	.18	.18	1.76	2.16	2.79	.67	.54	.24	.13	.20	9.12
1957	.59	.94	.93	2.89	4.30	2.12	3.72	.60	.73	.16	.11	1.47	18.56
1958	.77	1.75	2.20	2.25	2.06	3.71	4.74	3.24	.39	.43	.28	.14	21.96
1959	.15	.19	.51	.79	.62	1.49	3.57	.71	.27	.13	.18	.33	8.94
1960	1.19	1.60	2.40	1.30	3.35	4.18	3.18	1.97	.57	.16	.13	.20	20.23

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	122	15.64
1951	1203	4,310	Mar. 31, 1951	10	140	1.32	17.88	129	16.43
1952	1233	5,000	Mar. 11, 1952	9.6	136	1.28	17.47	139	17.85
1953	1273	4,880	Mar. 24, 1953	8.0	125	1.18	16.01	116	14.88
1954	1333	3,100	Mar. 1, 1954	7.8	76.2	.719	9.74	91.5	11.71
1955	1383	3,760	Mar. 1, 1955	7.2	140	1.32	17.94	123	15.72
1956	1433	2,180	Apr. 16, 1956	8	70.7	.667	9.12	86.4	11.13
1957	1503	3,420	Apr. 5, 1957	6.9	145	1.37	18.56	162	20.82
1958	(a)	2,100	Apr. 23, 1958	10	172	1.62	21.96	142	18.09
1959	(a)	1,810	Apr. 13, 1959	8.0	69.8	.658	8.94	103	13.28
1960	(a)	2,800	Apr. 4, 1960	8.8	158	1.49	20.23	-	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

JAMES RIVER BASIN

180. Craig Creek at Parr, Va.

Location.--Lat 37°39'55", long 79°54'40", on right bank 12 ft upstream from Chesapeake and Ohio Railway bridge, 700 ft downstream from Stony Run, 0.2 mile northeast of Horton, 0.4 mile northwest of Parr, Botetourt County, and 12 miles upstream from mouth.

Drainage area.--331 sq mi.

Records available.--April 1925 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 992.50 ft above mean sea level (levels by Corps of Engineers). Prior to June 7, 1937, chain gage at same site and datum.

Average discharge.--35 years (1925-60), 379 cfs.

Extremes.--1925-60: Maximum discharge, 19,100 cfs Jan. 23, 1935 (gage height, 17.0 ft, from graph based on gage readings), from rating curve extended above 11,000 cfs; minimum, 26 cfs Dec. 23, 1943 (gage height, 3.26 ft), result of freezeup.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	94.1	122	730	186	802	1,076	1,225	267	570	105	60.3	55.4	439
1952	51.5	79.5	288	870	809	1,101	1,222	492	108	67.0	141	199	402
1953	65.7	196	415	592	935	1,223	445	434	126	58.3	46.8	43.1	379
1954	40.5	51.1	97.8	299	244	851	393	305	96.1	119	64.1	44.6	216
1955	207	178	600	311	865	1,922	471	144	95.4	68.1	133	55.2	420
1956	46.8	54.5	52.9	51.2	549	578	690	180	113	68.8	42.2	60.6	205
1957	166	288	261	603	1,239	656	1,095	202	180	54.5	40.6	56.4	438
1958	261	545	602	654	617	985	1,270	986	137	155	146	56.3	534
1959	52.5	59.5	147	244	186	428	398	192	112	44.6	63.0	81.7	217
1960	476	442	611	402	1,028	1,073	914	554	186	54.5	44.9	54.9	485

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.33	0.41	2.55	0.65	2.52	3.75	4.13	0.93	1.92	0.37	0.21	0.19	17.96
1952	.18	.27	1.00	3.03	2.63	3.84	2.10	1.72	.36	.23	.49	.67	16.52
1953	.23	.66	1.44	2.06	2.94	4.25	1.50	1.51	.43	.20	.16	.14	15.52
1954	.14	.17	.34	1.04	.77	2.89	1.33	1.06	.32	.42	.22	.15	8.85
1955	.72	.60	2.09	1.08	2.72	6.70	1.58	.50	.32	.24	.46	.19	17.20
1956	.16	.18	.18	.18	1.79	2.02	2.32	.63	.38	.24	.15	.20	8.43
1957	.58	.97	.91	2.10	3.90	2.28	3.69	.70	.61	.19	.14	1.90	17.97
1958	.91	1.84	2.10	2.28	1.94	3.44	4.28	3.44	.46	.54	.51	.19	21.93
1959	.18	.20	.51	.85	.59	1.49	3.37	.67	.38	.16	.22	.28	8.90
1960	1.66	1.50	2.13	1.40	3.35	3.74	3.08	1.92	.63	.19	.16	.19	19.95

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	374	15.35
1951	1203	10,200	Dec. 8, 1950	48	438	1.32	17.96	393	16.12
1952	1233	7,510	Mar. 11, 1952	44	402	1.21	16.52	423	17.40
1953	1273	9,680	Mar. 24, 1953	34	379	1.15	15.52	338	13.84
1954	1353	12,000	Mar. 1, 1954	32	216	.653	8.85	283	11.61
1955	1383	10,100	Mar. 7, 1955	35	420	1.27	17.20	349	14.31
1956	1433	4,280	Apr. 16, 1956	32	205	.619	8.43	252	10.37
1957	1503	9,550	Apr. 5, 1957	30	438	1.32	17.97	497	20.36
1958	(a)	5,120	May 6, 1958	44	534	1.61	21.93	438	17.97
1959	(a)	4,860	Apr. 13, 1959	30	217	.656	8.90	323	13.30
1960	(a)	6,620	Oct. 1, 1959	36	485	1.47	19.95	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

185. Catawba Creek near Catawba, Va.

Location.--Lat 37°28'05", long 80°00'20", on right bank 80 ft above highway bridge, 1.0 mile downstream from Little Catawba Creek, 1.9 miles west of Haymakertown, and 8.2 miles northeast of Catawba, Roanoke County.

Drainage area.--34 sq mi, approximately.

Records available.--September 1943 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 1,299.96 ft above mean sea level, datum of 1929. Prior to Aug. 1, 1953, staff gage at site 80 ft downstream at same datum.

Average discharge.--17 years (1943-60), 36.9 cfs (adjusted for pumpage since October 1952).

Extremes.--1943-60: Maximum discharge, 5,670 cfs Mar. 1, 1954 (gage height, 6.58 ft), from rating curve extended above 1,100 cfs by logarithmic plotting; minimum, 1.8 cfs Dec. 21, 1958 (gage height, 1.35 ft).
Flood in August 1940 reached a stage of 13.26 ft, from information by observer.

Remarks.--Lone Star Cement Co. pumps about 0.4 cfs below gage and returns it above gage pool. Pumpage began in October 1952.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	13.0	16.3	66.6	15.1	60.6	103	152	29.4	51.9	18.2	8.05	5.94	44.8
1952	5.00	8.10	24.9	72.4	71.9	83.6	66.1	47.9	16.5	12.4	33.3	31.2	39.4
1953	8.21	23.1	41.5	60.4	72.8	130	52.0	37.9	13.1	6.06	5.06	3.73	37.7
1954	4.27	4.60	7.93	21.9	22.7	83.5	23.0	22.2	9.74	6.93	5.58	4.65	18.1
1955	25.4	17.4	48.0	22.5	68.2	154	56.6	15.8	10.9	8.57	13.6	7.12	37.2
1956	5.15	5.82	5.35	4.81	33.1	28.4	45.5	11.1	6.36	4.99	3.81	6.80	13.3
1957	35.2	26.3	26.7	58.3	138	60.7	92.3	21.1	24.4	7.97	6.62	32.3	43.4
1958	20.6	32.6	41.1	54.5	56.9	96.2	101	138	17.3	17.3	10.2	4.33	49.2
1959	4.79	5.77	14.4	19.9	10.7	26.0	68.5	18.4	7.29	4.93	4.78	37.4	18.5
1960	42.4	29.4	40.3	35.5	116	115	75.3	44.5	19.3	6.22	8.85	6.52	44.7

Monthly and yearly runoff, in inches (adjusted) a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.44	0.53	2.26	0.51	1.85	3.49	4.99	1.00	1.71	0.62	0.27	0.20	17.87
1952	.17	.27	.84	2.46	2.28	2.84	2.16	1.63	.54	.42	1.15	1.02	15.76
1953	.26	.75	1.40	2.03	2.22	4.39	1.70	1.27	.42	.19	.16	.11	14.90
1954	.13	.14	.25	.73	.68	2.81	.74	.17	.31	.22	.18	.14	7.07
1955	.85	.56	1.61	.75	2.07	5.22	1.84	.52	.34	.28	.45	.22	14.71
1956	.16	.18	.17	.15	1.04	.95	1.48	.36	.20	.16	.12	.21	5.18
1957	1.18	.85	.89	1.96	4.23	2.04	3.01	.70	.79	.26	.21	1.05	17.17
1958	.68	1.06	1.38	1.83	1.73	3.25	3.31	4.68	.55	.57	.33	.13	19.50
1959	.15	.18	.48	.66	.32	.87	2.23	.81	.23	.15	.15	1.22	7.25
1960	1.43	.95	1.35	1.19	3.68	5.90	2.46	1.50	.62	.20	.29	.20	17.77

a Adjusted for pumpage by Lone Star Cement Co. beginning October 1952.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year			
		Observed				Adjusted a/			Observed		Adjusted a/	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	
		Discharge	Date									
1950	-	-	-	-	-	-	-	-	-	39.3	-	15.68
1951	1203	3,300	Dec. 7, 1950	4.6	44.8	-	1.32	17.87	39.9	-	-	15.92
1952	1233	1,380	Sept. 1, 1952	3.6	39.4	-	1.16	15.76	42.3	41.9	16.78	
1953	1333	2,870	Mar. 24, 1953	3.2	37.7	37.3	1.10	14.90	33.0	32.6	13.01	
1954	1333	5,670	Mar. 1, 1954	5.6	18.1	17.7	.521	7.07	24.4	24.0	9.57	
1955	1383	1,420	Oct. 18, 1954	4.4	37.2	36.8	1.08	14.71	30.9	30.5	12.20	
1956	1433	443	Apr. 16, 1956	3.1	13.3	12.9	.379	5.18	19.3	18.9	7.59	
1957	1503	1,200	Apr. 5, 1957	4.5	43.4	43.0	1.26	17.17	43.9	43.5	17.37	
1958	1553	2,180	May 5, 1958	3.5	49.2	48.8	1.44	19.50	43.4	43.0	17.19	
1959	1623	4,150	Sept. 30, 1959	2.6	18.5	18.1	.532	7.25	25.8	25.4	10.17	
1960	1703	2,020	Feb. 11, 1960	3.4	44.7	44.3	1.30	17.77	-	-	-	

a Adjusted for pumpage by Lone Star Cement Co. beginning October 1952.

195. James River at Buchanan, Va.

Location.--Lat 37°31'50", long 79°40'45", on left bank at Chesapeake & Ohio Railway station at Buchanan, Botetourt County, 300 ft upstream from bridge on U.S. Highway 11, 1,000 ft upstream from Purgatory Creek, 1½ miles downstream from Looney Creek, and at mile 301.2.

Drainage area.--2,084 sq mi.

Records available.--February 1898 to September 1960. Monthly discharges only for some periods, published in WSP 1303. Records for August 1895 to Feb. 11, 1898, published in WSP 11, 15, and 27 have been found to be in error and should not be used. Gage-height records collected at this site since 1893 are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 802.90 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 21, 1903, wire-weight gage, and Nov. 21, 1903, to July 1, 1927, chain gage, at same site and datum.

Average discharge.--62 years (1898-1960), 2,490 cfs.

Extremes.--1898-1960: Maximum discharge, about 105,000 cfs Mar. 27, 1913 (gage height, 31 ft, from floodmarks), from rating curve extended above 53,000 cfs by logarithmic plotting and records for other stations in James River basin; minimum, 208 cfs Jan. 9, 1956 (gage height, 1.46 ft) result of freezeup; minimum daily, 259 cfs Sept. 11, 12, 19, 20, 1932.

Flood in November 1877 reached a stage of 34.9 ft, from floodmark (discharge, about 125,000 cfs).

Remarks.--Records of chemical analyses for the periods October 1951 to September 1952, October 1955 to September 1956; suspended sediment loads and water temperatures for the period May 1951 to September 1956, are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	779	1,010	5,878	1,752	6,095	5,945	8,067	2,223	4,784	1,161	648	496	3,207
1952	424	643	2,461	6,167	4,372	6,784	4,143	3,519	935	550	1,156	974	2,679
1953	512	1,097	2,158	5,732	5,648	6,966	2,770	2,290	997	684	445	406	2,292
1954	355	535	855	1,940	1,713	5,553	2,764	2,115	1,046	1,274	546	369	1,581
1955	2,436	2,053	4,066	2,199	5,231	11,460	2,849	1,200	849	526	1,016	449	2,858
1956	370	429	415	371	3,656	3,530	3,610	1,089	958	595	445	507	1,318
1957	1,097	1,251	1,560	3,219	7,101	3,736	6,081	1,860	1,712	621	361	1,997	2,510
1958	1,244	2,127	3,671	3,552	3,939	5,501	7,498	5,345	1,036	1,116	1,618	535	3,095
1959	404	420	758	1,476	1,281	2,769	5,334	2,007	2,223	530	516	496	1,513
1960	2,524	2,157	3,261	2,534	5,207	5,918	6,360	4,479	1,735	570	523	720	2,990

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.43	0.54	3.25	0.97	3.04	3.29	4.32	1.23	2.54	0.64	0.36	0.26	20.87
1952	.23	.34	1.36	3.41	2.26	3.76	2.22	1.95	.50	.30	.64	.52	17.49
1953	.28	.59	1.20	2.06	2.82	3.85	1.48	1.27	.53	.38	.25	.22	14.93
1954	.20	.21	.47	1.07	.86	3.07	1.48	1.16	.56	.70	.30	.20	10.28
1955	1.35	1.10	2.26	1.22	2.61	6.34	1.53	.66	.45	.29	.56	.24	18.61
1956	.21	.23	.23	.21	1.89	1.95	1.93	.60	.51	.33	.25	.27	8.61
1957	.61	.67	.86	1.78	3.55	2.06	3.26	1.03	.92	.34	.20	1.07	16.35
1958	.69	1.14	2.03	1.96	1.97	3.04	4.02	2.95	.55	.62	.69	.29	20.15
1959	.22	.22	.42	.82	.64	1.53	2.86	1.11	1.19	.29	.29	.27	9.86
1960	1.40	1.15	1.80	1.40	2.69	3.27	3.40	2.48	.93	.32	.29	.39	19.52

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	2,766	18.02
1951	1203	49,800	Dec. 8, 1950	420	3,207	1.54	20.87	2,857	18.58
1952	1233	42,000	Mar. 12, 1952	398	2,679	1.29	17.49	2,698	17.63
1953	1273	46,000	Feb. 22, 1953	315	2,292	1.10	14.93	2,111	13.74
1954	1333	46,400	Mar. 2, 1954	279	1,581	.759	10.28	2,168	14.11
1955	1383	46,600	Mar. 7, 1955	318	2,858	1.37	16.61	2,237	14.57
1956	1433	15,600	Apr. 17, 1956	275	1,318	.632	8.61	1,544	10.08
1957	1503	46,400	Apr. 6, 1957	267	2,510	1.20	16.35	2,774	18.07
1958	1553	29,500	Mar. 31, 1958	415	3,095	1.49	20.15	2,636	17.15
1959	1623	20,100	Apr. 13, 1959	272	1,513	.726	9.86	2,046	13.35
1960	1703	44,700	Mar. 31, 1960	375	2,990	1.43	19.52	-	-

205. Calfpasture River above Mill Creek, at Goshen, Va.

Location.--Lat 37°59'15", long 79°29'40", on left bank 20 ft upstream from highway bridge, at Goshen, Rockbridge County, 400 ft upstream from Mill Creek.

Drainage area.--147 sq mi.

Records available.--October 1938 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder and concrete control. Datum of gage is 1,384.84 ft above mean sea level, datum of 1929, Parkersburg-Uniontown supplementary adjustment of 1944.

Average discharge.--22 years (1938-60), 158 cfs.

Extremes.--1938-60: Maximum discharge, 14,800 cfs June 18, 1949 (gage height, 12.14 ft), from rating curve extended above 9,200 cfs by logarithmic plotting; no flow Sept. 5, 6, 1957, and Sept. 28, 1959, result of pumpage; minimum gage height, 0.48 ft Sept. 6, 1957.

Remarks.--Discharge given herein includes diversion 50 ft above control by Stillwater Worsted Mill.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	29.2	87.9	550	161	506	328	458	155	339	62.1	37.6	11.0	225
1952	7.75	18.2	200	472	274	416	381	233	31.5	12.5	22.5	30.5	175
1953	9.02	75.7	146	299	424	551	164	110	31.1	8.02	6.91	5.04	151
1954	4.86	8.09	92.5	138	185	534	258	221	136	51.1	10.9	6.34	135
1955	149	227	304	95.4	297	631	156	75.7	76.7	17.3	177	22.2	186
1956	9.91	10.1	9.77	11.3	235	233	186	44.9	28.5	9.98	8.00	7.17	65.3
1957	20.4	46.8	77.4	154	364	206	493	195	150	46.2	5.95	28.2	147
1958	43.0	100	279	159	215	344	534	297	47.6	35.0	31.2	17.8	173
1959	8.53	6.83	30.5	99.0	91.2	161	334	147	259	45.9	23.3	13.5	101
1960	198	104	203	215	309	428	353	378	175	15.6	10.3	22.5	201

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.23	0.87	4.31	1.27	3.58	2.57	3.48	1.21	2.58	0.49	0.30	0.08	20.77
1952	.06	.14	1.57	3.70	2.01	3.26	2.89	1.83	.24	.10	.18	.23	16.21
1953	.07	.57	1.14	2.34	3.00	4.52	1.25	.86	.24	.06	.05	.04	13.94
1954	.04	.06	.73	1.08	1.29	4.18	1.96	1.73	1.03	.24	.09	.05	12.48
1955	1.16	1.72	2.39	.75	2.10	4.95	1.18	.59	.58	.14	1.38	.17	17.11
1956	.08	.09	.08	.09	1.73	1.83	1.42	.35	.22	.08	.06	.05	6.07
1957	.16	.35	.61	1.21	2.58	1.61	3.74	1.53	1.14	.36	.05	.21	13.55
1958	.34	.76	2.19	1.24	1.52	2.70	4.05	2.33	.36	.12	.24	.14	15.99
1959	.07	.05	.24	.78	.65	1.27	2.53	1.15	1.96	.36	.18	.10	9.34
1960	1.56	.79	1.59	1.68	2.26	5.36	2.68	2.96	1.33	.12	.08	.17	18.58

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	203	18.70
1951	1203	10,200	Dec. 8, 1950	8.1	225	1.53	20.77	188	17.33
1952	1233	5,080	Mar. 11, 1952	5.5	175	1.19	16.21	175	16.22
1953	1273	9,080	Feb. 21, 1953	2.7	151	1.03	13.94	141	12.99
1954	1333	10,900	Mar. 1, 1954	2.3	135	.918	12.48	184	16.92
1955	1383	6,480	Oct. 16, 1954	4.4	186	1.27	17.11	131	12.08
1956	1433	1,520	Mar. 14, 1956	3.1	65.3	.444	6.07	75.0	6.95
1957	1503	7,840	Apr. 5, 1957	0	147	1.00	13.55	170	15.72
1958	(a)	2,280	Dec. 28, 1957	10	173	1.18	15.99	142	13.06
1959	(a)	6,120	June 2, 1959	0	101	.687	9.34	140	12.92
1960	(a)	5,600	May 8, 1960	2.6	201	1.37	18.58	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

215. Maury River at Rockbridge Baths, Va.

Location.--Lat 37°54'26", long 79°25'20", on right bank at Rockbridge Baths, Rockbridge County, 700 ft upstream from highway bridge and 1 mile upstream from Hays Creek.

Drainage area.--329 sq mi.

Records available.--October 1928 to September 1960. Prior to October 1945, published as North River at Rockbridge Baths.

Gage.--Water-stage recorder. Datum of gage is 1,100.33 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--32 years (1928-60), 359 cfs.

Extremes.--1928-60: Maximum discharge, 33,000 cfs Mar. 17, 1936 (gage height, 13.07 ft), from rating curve extended above 16,000 cfs by logarithmic plotting; minimum, 9 cfs Nov. 28, 1930 (gage height, 0.76 ft), result of freezeup; minimum daily, 11 cfs Sept. 27, 30, 1930.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	85.2	181	1,188	312	1,107	707	1,091	368	744	182	77.7	35.4	501
1952	27.5	60.7	450	1,116	708	1,100	831	573	84.7	39.3	75.1	69.5	428
1953	37.5	172	300	641	908	1,265	462	321	107	68.8	32.4	27.8	359
1954	27.2	34.3	184	321	439	1,185	572	484	232	103	35.3	23.9	303
1955	299	507	683	283	733	1,477	459	160	180	49.5	329	54.1	434
1956	34.3	41.7	35.2	38.8	509	560	438	112	85.6	32.9	27.6	30.0	160
1957	47.3	88.4	145	285	845	526	1,091	406	243	58.9	21.6	90.5	316
1958	99.7	258	603	452	562	890	1,234	775	121	106	90.2	43.0	435
1959	28.4	34.2	81.1	217	184	412	876	310	423	136	56.9	86.8	236
1960	558	303	456	426	807	989	910	891	352	52.5	44.2	69.0	487

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.30	0.61	4.16	1.09	3.50	2.48	3.70	1.29	2.52	0.64	0.27	0.12	20.68
1952	.10	.21	1.58	3.91	2.32	3.85	2.82	2.01	.29	.14	.26	.24	17.73
1953	.13	.58	1.05	2.25	2.87	4.43	1.56	1.13	.36	.24	.11	.09	14.80
1954	.10	.12	.64	1.13	1.38	4.15	1.94	1.70	.79	.36	.12	.08	12.51
1955	1.05	1.72	2.40	.99	2.32	5.18	1.56	.56	.61	.17	1.15	.18	17.89
1956	.12	.14	.12	.14	1.67	1.96	1.48	.39	.29	.12	.10	.10	6.63
1957	.17	.30	.51	1.00	2.68	1.84	3.70	1.42	.82	.21	.08	.31	13.04
1958	.35	.87	2.11	1.58	1.78	3.12	4.18	2.72	.41	.37	.32	.15	17.96
1959	.10	.12	.28	.76	.58	1.44	2.97	1.09	1.43	.48	.20	.29	9.74
1960	1.95	1.03	1.60	1.49	2.64	3.46	3.08	3.12	1.19	.18	.15	.23	20.12

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	453	18.69
1951	1203	14,400	Dec. 8, 1950	26	501	1.52	20.68	424	17.50
1952	1233	9,900	Mar. 11, 1952	23	428	1.30	17.73	425	17.60
1953	1273	12,800	Feb. 21, 1953	22	359	1.09	14.80	337	13.90
1954	1333	14,400	Mar. 1, 1954	20	303	.921	12.51	408	16.82
1955	1383	9,200	Oct. 16, 1954	19	434	1.32	17.89	318	13.10
1956	1433	3,650	Mar. 14, 1956	16	160	.486	6.63	175	7.23
1957	1503	11,300	Apr. 5, 1957	15	316	.960	13.04	373	15.39
1958	1553	4,220	Apr. 1, 1958	29	435	1.32	17.96	367	15.13
1959	1623	7,550	June 3, 1959	18	236	.717	9.74	335	13.82
1960	1703	9,550	Mar. 30, 1960	26	487	1.48	20.12	-	-

225. Kerrs Creek near Lexington, Va.

Location--37°49'35", long 79°26'35", 1.4 miles upstream from mouth and 2.9 miles north of Lexington, Rockbridge County.

Drainage area--34 sq mi, approximately.

Records available--October 1926 to September 1960.

Gage--Water-stage recorder. Datum of gage is 980.32 ft above mean sea level (levels by Corps of Engineers). Jan. 27, 1927, to Sept. 30, 1953, chain or wire-weight gage at site 1,000 ft downstream at different datum.

Average discharge--34 years (1926-60), 36.9 cfs.

Extremes--1926-60: Maximum discharge, 23,000 cfs Sept. 10, 1950 (gage height, 13.8 ft, site and datum then in use), from rating curve extended above 800 cfs on basis of one slope-area measurement at gage height 9.3 ft (site and datum then in use), and one contracted-opening and one slope-area measurement at gage height 13.8 ft; minimum, 3.1 cfs Dec. 16, 1955 (gage height, 2.11 ft), result of freezeup.

Cooperation--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	15.7	13.9	87.6	20.9	94.5	60.3	102	30.2	86.4	35.9	15.1	10.1	47.4
1952	8.92	12.2	35.1	81.1	75.6	143	53.9	50.4	18.9	11.1	13.1	11.6	43.0
1953	9.49	16.8	22.1	51.9	70.8	91.1	38.5	31.3	18.7	56.1	9.61	9.18	35.3
1954	7.29	7.30	10.7	15.7	36.6	94.9	44.9	21.8	18.1	9.68	7.35	5.63	23.3
1955	27.3	33.7	47.9	25.6	70.2	161	50.4	17.1	13.8	11.8	15.1	8.46	40.1
1956	7.76	8.32	6.94	6.56	28.6	37.9	36.3	12.0	8.69	6.21	6.11	7.73	14.3
1957	8.94	10.0	11.6	19.6	67.6	46.5	83.1	28.5	16.6	8.36	6.57	15.1	26.5
1958	10.2	22.0	47.9	50.5	57.6	81.2	86.2	75.6	16.9	13.0	11.2	8.95	40.0
1959	7.90	8.50	9.00	12.7	9.01	20.9	64.8	21.5	20.0	12.2	8.53	35.2	19.0
1960	78.6	28.9	47.0	35.1	102	88.1	96.1	58.9	40.4	13.2	9.37	8.92	50.4

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.53	0.46	2.97	0.71	2.90	2.04	3.35	1.02	2.83	1.26	0.51	0.33	18.91
1952	.30	.40	1.19	2.76	2.39	4.85	1.77	1.71	.62	.38	.44	.38	17.19
1953	.52	.55	.75	1.76	2.17	3.09	1.26	1.06	.61	1.90	.33	.30	14.10
1954	.25	.24	.36	.53	1.12	3.22	1.47	.74	.59	.33	.25	.19	9.29
1955	.93	1.11	1.63	.87	2.14	5.46	1.65	.58	.45	.40	.51	.28	16.01
1956	.26	.27	.24	.22	.91	1.28	1.19	.41	.29	.21	.21	.25	5.74
1957	.30	.33	.39	.66	2.07	1.58	2.72	.97	.54	.28	.22	.50	10.56
1958	.35	.72	1.63	1.72	1.76	2.76	2.83	2.56	.55	.44	.38	.29	15.99
1959	.27	.28	.31	.43	.28	.71	2.13	.73	.66	.41	.29	1.09	7.59
1960	2.66	.95	1.59	1.19	3.24	2.99	3.16	1.99	1.33	.45	.32	.33	20.19

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	46.4	18.53
1951	1203	5,260	July 14, 1951	8.8	47.4	1.39	18.91	42.2	16.84
1952	1233	4,620	Mar. 11, 1952	8.4	43.0	1.26	17.19	42.3	16.92
1953	1273	3,560	July 1, 1953	7.8	35.3	1.04	14.10	33.4	13.33
1954	1333	6,700	Mar. 1, 1954	5	23.3	.685	9.29	30.3	12.11
1955	1383	2,480	Oct. 15, 1954	5.4	40.1	1.18	16.01	32.9	13.11
1956	1433	391	Mar. 14, 1956	5.0	14.3	.421	5.74	15.0	5.99
1957	1503	1,250	Apr. 5, 1957	6.0	26.5	.779	10.56	30.7	12.24
1958	(a)	720	Mar. 31, May 5	7.4	40.0	1.18	15.99	35.4	14.15
1959	(a)	4,680	Sept. 30, 1959	5.8	19.0	.559	7.59	29.8	11.93
1960	(a)	8,400	Oct. 24, 1959	7.6	50.4	1.48	20.19	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

230. Maury River near Lexington, Va.

Location.--Lat 37°48'49", long 79°26'42", 900 ft upstream from Lime Kiln highway bridge, 0.2 mile downstream from Kerrs Creek, and 2.8 miles upstream from Lexington Rockbridge County.

Drainage area.--487 sq mi.

Records available.--August 1925 to September 1960. Monthly discharge only for some periods, published in WSP 1303. Prior to October 1945, published as North River near Lexington.

Gage.--Water-stage recorder. Datum of gage is 906.56 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--35 years (1925-60), 506 cfs.

Extremes.--1925-60: Maximum discharge, 40,000 cfs Mar. 18, 1936 (gage height, 23.58 ft, from floodmarks), from rating curve extended above 9,000 cfs by logarithmic plotting and on basis of records for other stations in James River basin; minimum, 34 cfs Sept. 6, 1930, Sept. 18, 1932; minimum gage height, 1.87 ft Sept. 18, 1932.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	161	251	1,489	419	1,496	974	1,548	542	1,010	327	160	95.7	699
1952	81.1	115	590	1,461	1,013	1,499	1,060	794	181	107	144	133	598
1953	83.8	256	410	800	1,125	1,621	626	480	226	155	78.5	70.6	491
1954	66.4	70.5	247	377	554	1,440	705	569	308	174	78.8	55.9	387
1955	423	663	868	423	996	1,880	662	258	289	115	421	107	591
1956	75.7	77.5	65.8	75.5	622	699	554	174	124	70.9	59.2	63.6	220
1957	85.0	124	185	335	1,009	666	1,261	496	301	99.6	52.0	143	391
1958	137	323	760	618	768	1,144	1,578	1,110	223	182	144	86	588
1959	69.6	75.1	121	275	236	486	1,127	397	530	205	114	133	313
1960	828	430	710	640	1,230	1,275	1,362	1,095	496	117	102	122	699

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.38	0.57	3.53	0.99	3.20	2.31	3.55	1.28	2.31	0.77	0.38	0.22	19.49
1952	.19	.26	1.40	3.46	2.24	3.55	2.43	1.88	.42	.25	.34	.30	16.72
1953	.20	.59	.97	1.89	2.40	3.84	1.44	1.14	.52	.37	.19	.16	13.71
1954	.16	.16	.58	.89	1.19	3.41	1.62	1.35	.71	.41	.19	.13	10.80
1955	1.00	1.52	2.05	1.00	2.14	4.45	1.52	.61	.66	.27	1.00	.25	16.47
1956	.18	.18	.16	.18	1.38	1.66	1.27	.41	.28	.17	.14	.15	6.16
1957	.20	.28	.44	.79	2.16	1.58	2.89	1.18	.89	.24	.12	.33	10.90
1958	.32	.74	1.80	1.46	1.64	2.71	5.62	2.63	.51	.43	.54	.20	16.40
1959	.16	.17	.29	.65	.51	1.15	2.58	.94	1.22	.49	.27	.30	8.73
1960	1.96	.99	1.68	1.51	2.73	3.02	3.12	2.59	1.14	.28	.24	.28	19.54

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	618	17.22
1951	1203	15,100	Dec. 8, 1950	82	699	1.44	19.49	605	16.86
1952	1233	12,100	Mar. 11, 1952	75	598	1.23	16.72	595	16.63
1953	1273	13,900	Feb. 21, 1953	55	491	1.01	13.71	461	12.85
1954	1333	14,900	Mar. 1, 1954	48	387	.795	10.80	519	14.47
1955	1383	10,500	Oct. 15, 1954	48	591	1.21	16.47	445	12.42
1956	1433	4,100	Mar. 14, 1956	41	220	.452	6.16	235	6.56
1957	1503	12,900	Apr. 6, 1957	42	391	.803	10.90	460	12.84
1958	(a)	5,280	Apr. 1, 1958	69	588	1.21	16.40	508	14.16
1959	(a)	7,850	June 3, 1959	56	313	.643	8.73	457	12.74
1960	(a)	11,000	Mar. 30, 1960	72	699	1.44	19.54	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

235. South River near Riverside, Va.

Location.--Lat 37°47'00" (corrected), long 79°21'35", on right bank 20 ft upstream from highway bridge, 1.1 miles southwest of Riverside, Rockbridge County, 1.9 miles upstream from mouth, and 4 miles east of Lexington.

Drainage area.--111 sq mi.

Records available.--October 1949 to September 1956, October 1957 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 910 ft (from topographic map).

Average discharge.--10 years (1949-56, 1957-60), 131 cfs.

Extremes.--1949-56, 1957-60: Maximum discharge, 4,890 cfs Oct. 15, 1954 (gage height, 9.44 ft); minimum, 12 cfs Sept. 16, 17, 18, 1954 (gage height, 2.00 ft).

Flood in March 1936 reached a stage of about 13.7 ft, from information by local residents.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	42.8	49.2	384	102	301	272	353	143	286	67.5	36.1	23.7	171
1952	21.0	33.8	136	270	306	304	303	251	69.3	38.9	85.9	89.4	159
1953	38.3	119	167	200	219	363	222	178	85.2	35.9	22.9	23.3	139
1954	20.3	22.5	64.0	67.6	96.5	325	117	134	54.9	38.0	21.8	15.8	81.7
1955	130	232	228	131	182	458	247	87.2	111	32.5	161	58.8	172
1956	31.7	32.1	26.4	28.4	133	154	141	56.6	32.8	28.8	22.9	29.7	59.4
1957	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	22.2	68.2	152	156	198	280	388	272	84.5	70.5	57.9	27.7	148
1959	25.1	25.8	99.1	124	69.0	121	244	84.3	194	53.5	40.9	72.0	95.9
1960	237	125	168	118	300	285	390	311	101	37.1	24.4	22.0	177

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.44	0.49	3.99	1.06	2.82	2.82	3.55	1.49	2.98	0.70	0.37	0.24	20.95
1952	.22	.34	1.42	2.80	2.98	3.16	3.05	2.61	.70	.40	.89	.90	19.47
1953	.40	1.19	1.73	2.08	2.05	3.77	2.23	1.84	.86	.37	.24	.23	16.99
1954	.21	.23	.67	.70	.90	3.38	1.17	1.40	.55	.39	.23	.16	9.99
1955	1.35	2.33	2.36	1.36	1.71	4.76	2.49	.91	1.12	.34	1.67	.59	20.99
1956	.33	.32	.27	.30	1.29	1.60	1.42	.59	.33	.30	.24	.30	7.29
1957	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	.23	.68	1.58	1.63	1.85	2.90	3.90	2.82	.85	.73	.60	.28	18.05
1959	.26	.26	1.03	1.29	.65	1.26	2.46	.88	1.95	.56	.42	.72	11.74
1960	2.47	1.26	1.74	1.22	2.91	2.96	3.92	3.23	1.02	.39	.25	.22	21.59

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	129	15.84
1951	1203	3,860	Dec. 7, 1950	20	171	1.54	20.95	147	18.01
1952	1233	2,310	Mar. 11, 1952	18	159	1.43	19.47	170	20.81
1953	1273	1,440	Mar. 24, 1953	14	139	1.25	16.99	121	14.78
1954	1333	4,000	Mar. 1, 1954	12	81.7	.736	9.99	122	14.92
1955	1383	4,890	Oct. 15, 1954	14	172	1.55	20.99	130	15.87
1956	1433	472	Feb. 7, Mar. 14	14	59.4	.535	7.29	-	-
1957	-	-	-	-	-	-	-	-	-
1958	(a)	1,950	Mar. 31, 1958	18	148	1.33	18.05	140	17.11
1959	(a)	3,740	Sept. 30, 1959	18	95.9	.864	11.74	128	15.66
1960	(a)	2,840	Mar. 8, 1960	17	177	1.59	21.59	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

240. Maury River near Buena Vista, Va.

Location.--Lat 37°45'45", long 79°23'30", on right bank 0.5 mile downstream from South River and 2.8 miles northwest of Buena Vista, Rockbridge County.

Drainage area.--649 sq mi.

Records available.--October 1938 to September 1960. Monthly discharge only for some periods, published in WSP 1303. Prior to October 1945, published as North River near Buena Vista.

Gage.--Water-stage recorder. Datum of gage is 846.58 ft above mean sea level, datum of 1929.

Average discharge.--22 years (1938-60), 658 cfs.

Extremes.--1938-60: Maximum discharge, 22,400 cfs Sept. 10, 1950 (gage height, 16.2 ft); minimum, 20 cfs Oct. 10, 1941 (gage height, 1.23 ft), occurred during filling of a small reservoir 2 miles upstream; unqualified minimum, 50 cfs Oct. 6, 1941 (gage height, 1.50 ft).

Flood of Mar. 18, 1936, reached a stage of about 22 ft, from information by local residents.

Remarks.--Small diurnal fluctuation at low flow during 1941 and 1942 water years.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	225	315	1,778	521	1,839	1,260	1,969	689	1,288	438	213	121	880
1952	102	165	765	1,914	1,409	1,844	1,411	1,095	287	162	235	254	803
1953	132	402	601	1,022	1,356	2,001	877	700	350	218	120	107	654
1954	98.8	106	316	450	651	1,709	831	708	380	227	113	84.3	473
1955	560	874	1,105	615	1,225	2,425	997	377	423	162	709	181	803
1956	115	124	109	107	802	916	744	256	175	105	88.6	113	302
1957	188	239	279	447	1,320	880	1,575	647	395	142	81.9	194	523
1958	175	410	919	845	968	1,453	1,998	1,443	340	290	235	135	766
1959	109	116	225	423	328	612	1,585	511	779	313	183	201	431
1960	1,096	585	916	793	1,524	1,536	1,878	1,436	635	174	139	152	903

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.40	0.54	3.16	0.93	2.95	2.24	3.38	1.22	2.21	0.78	0.38	0.21	18.40
1952	.18	.28	1.36	3.40	2.34	3.27	2.42	1.95	.49	.29	.42	.44	16.84
1953	.23	.69	1.07	1.81	2.18	3.55	1.51	1.24	.60	.39	.21	.18	13.66
1954	.18	.18	.56	.80	1.04	3.03	1.43	1.28	.65	.40	.20	.14	9.87
1955	.99	1.51	1.96	1.09	1.97	4.31	1.72	.67	.73	.29	1.26	.31	16.81
1956	.20	.21	.19	.19	1.34	1.63	1.28	.45	.30	.19	.16	.19	6.33
1957	.30	.41	.50	.79	2.11	1.57	2.71	1.15	.68	.25	.15	.33	10.95
1958	.31	.71	1.64	1.50	1.55	2.58	3.44	2.56	.58	.52	.42	.23	16.04
1959	.19	.20	.40	.75	.53	1.09	2.38	.91	1.34	.56	.33	.35	9.03
1960	1.95	1.01	1.63	1.41	2.53	2.73	3.23	2.55	1.09	.31	.25	.26	18.95

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	762	15.94	
1951	1203	15,600	Dec. 8, 1950	101	880	1.36	18.40	771	16.12	
1952	1233	13,400	Mar. 11, 1952	95	803	1.24	16.84	811	17.01	
1953	1273	13,600	Feb. 21, 1953	85	654	1.01	13.66	603	12.59	
1954	1333	15,800	Mar. 1, 1954	68	473	.729	9.87	642	13.41	
1955	1383	12,500	Oct. 15, 1954	70	803	1.24	16.81	619	12.95	
1956	1433	4,770	Mar. 14, 1956	84	302	.465	6.33	330	6.94	
1957	1503	12,500	Apr. 6, 1957	62	523	.806	10.95	592	12.40	
1958	1553	6,010	Apr. 1, 1958	103	766	1.18	16.04	677	14.17	
1959	1623	9,020	Sept. 30, 1959	76	431	.664	9.03	612	12.83	
1960	1703	12,100	Mar. 31, 1960	97	903	1.39	18.95	-	-	

250. Pedlar River near Pedlar Mills, Va.

Location--Lat 37°32'35", long 79°15'10", on right bank 6 ft downstream from highway bridge, 1.2 miles south of Pedlar Mills, Amherst County, 1.5 miles downstream from Horsley Mill Creek, and 3.7 miles upstream from mouth.

Drainage area--91 sq mi, approximately.

Records available--July 1942 to September 1956.

Gage--Water-stage recorder. Altitude of gage is 656 ft (by barometer).

Average discharge--14 years (1942-56), 116 cfs (adjusted).

Extremes--1942-56: Maximum discharge, 11,200 cfs Aug. 8, 1942 (gage height, 14.1 ft, from floodmark in gage well), from rating curve extended above 2,200 cfs by logarithmic plotting; minimum, 2.3 cfs Sept. 8, 1944 (gage height, 1.83 ft).

Remarks--Diversion above station for municipal supply of city of Lynchburg.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	26.8	34.9	216	66.7	222	181	291	113	127	42.2	17.1	10.0	111
1952	10.8	26.1	144	179	183	324	207	178	47.8	29.8	152	110	133
1953	30.7	103	128	202	235	303	177	134	70.9	25.1	12.5	9.11	119
1954	14.1	11.2	62.0	77.2	†91.8	193	78.7	57.8	33.0	19.3	12.6	4.15	54.5
1955	57.4	155	127	77.4	173	281	221	70.6	116	24.8	235	56.7	133
1956	24.0	22.7	21.2	18.9	96.8	85.5	103	36.7	18.4	21.6	11.7	11.0	39.0
1957	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

† Corrected.

Monthly and yearly runoff, in inches (adjusted) a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.51	0.59	2.90	1.01	2.68	2.46	3.73	1.59	1.72	0.70	0.38	0.24	18.51
1952	.23	.53	2.03	2.42	2.31	4.25	2.70	2.42	.75	.54	2.10	1.52	21.80
1953	.56	1.42	1.79	2.71	2.84	4.00	2.33	1.87	1.04	.46	.29	.21	19.52
1954	.28	.26	1.10	1.13	1.19	2.59	1.12	.92	.57	.41	.27	.11	9.95
1955	1.06	2.06	1.79	1.16	2.16	3.75	2.89	1.09	1.62	.52	3.17	.88	22.15
1956	.48	.47	.44	.41	1.36	1.27	1.45	.65	.38	.44	.27	.28	7.90
1957	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

a Adjusted for diversion from and change in contents of Lynchburg Reservoir.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted a/			Observed		Adjusted a/
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	-	91.4	105
1951	1203	2,900	Feb. 7, 1951	6.4	111	124	1.36	18.51	103	116	17.30
1952	1233	4,620	Mar. 11, 1952	5.2	133	146	1.60	21.80	139	152	22.78
1953	1275	2,820	Mar. 24, 1953	4.4	119	131	1.44	19.52	104	117	17.39
1954	1333	2,500	Mar. 1, 1954	2.8	54.5	66.7	.733	9.95	75.5	88.6	13.22
1955	1383	6,890	Aug. 18, 1955	3.0	133	149	1.64	22.15	110	115	18.63
1956	1433	856	July 20, 1956	3.8	39.0	52.7	.579	7.90	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-

a Adjusted for diversion from and change in contents of Lynchburg Reservoir.

255. James River at Holcombs Rock, Va.

Location.--Lat 37°30'04", long 79°15'46", on right bank at Holcombs Rock, Bedford County, 0.9 mile downstream from Pedlar River, and at mile 263.2.

Drainage area.--3,250 sq mi.

Records available.--January 1900 to September 1915 (gage heights only), October 1926 to September 1960. Monthly discharge only for some periods, published in WSP 1303. Published as "at Salt Creek" December 1926 to June 1931.

Gage.--Water-stage recorder. Datum of gage is 548.53 ft above mean sea level, datum of 1929. January 1900 to September 1915, float gage in powerhouse of Virginia Electrolytic Co., 1,000 ft upstream at different datum. December 1926 to June 1931, water-stage recorder at site 2 miles downstream at different datum.

Average discharge.--34 years (1926-60), 3,530 cfs.

Extremes.--1926-60: Maximum discharge, 115,000 cfs Mar. 18, 1936 (gage height, 30.78 ft), from rating curve extended above 57,000 cfs on basis of records for other stations in James River basin; minimum, 100 cfs Sept. 21, 1941 (gage height, 3.02 ft); minimum daily, 223 cfs July 28, 1930.

Flood in March 1913 reached a stage of 31.3 ft, from floodmarks (discharge, 118,000 cfs, from rating curve extended above 57,000 cfs on basis of records for other stations in James River basin).

Remarks.--Low flow regulated by powerplants above station.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,245	1,596	8,506	2,800	8,615	7,435	10,919	3,495	6,437	1,888	1,023	760	4,522
1952	647	1,020	3,658	8,800	7,089	10,060	6,458	5,553	1,545	887	2,175	1,846	4,145
1953	830	1,933	3,274	5,608	8,073	10,430	4,616	3,821	1,783	1,192	672	588	3,546
1954	528	808	1,503	2,784	2,936	8,092	4,083	3,258	1,670	1,653	802	537	2,374
1955	3,731	3,833	5,820	5,531	7,134	15,180	5,033	2,147	1,767	869	2,568	1,003	4,378
1956	660	738	726	631	4,947	5,047	5,134	1,742	1,445	929	692	885	1,947
1957	1,659	2,146	2,317	4,438	10,510	5,964	8,864	2,919	2,422	977	551	2,527	3,717
1958	1,712	3,012	5,356	5,409	5,580	8,124	11,287	8,095	1,779	1,719	2,146	851	4,583
1959	680	714	1,331	2,365	1,892	3,795	7,729	2,918	3,647	857	852	1,042	2,311
1960	5,056	3,219	4,785	3,854	8,344	8,460	10,067	6,561	3,124	1,024	862	1,077	4,687

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.44	0.55	3.02	0.99	2.76	2.64	3.75	1.24	2.21	0.67	0.36	0.26	18.89
1952	.23	.35	1.50	3.12	2.35	3.57	2.22	1.97	.53	.31	.77	.63	17.35
1953	.29	.66	1.16	1.99	2.58	3.70	1.58	1.36	.61	.42	.24	.20	14.79
1954	.19	.21	.53	.99	.94	2.87	1.41	1.15	.57	.59	.28	.18	9.91
1955	1.35	1.32	2.06	1.26	2.29	5.38	1.73	.76	.61	.31	.91	.34	18.30
1956	.23	.25	.26	.22	1.64	1.79	1.76	.62	.50	.33	.25	.30	8.15
1957	.59	.74	.82	1.58	3.36	2.12	3.05	1.04	.83	.35	.20	.87	15.55
1958	.61	1.03	1.89	1.91	1.79	2.88	3.87	2.87	.61	.61	.76	.29	19.12
1959	.24	.25	.47	.84	.61	1.35	2.66	1.04	1.25	.30	.30	.36	9.67
1960	1.80	1.10	1.70	1.57	2.77	3.00	3.46	2.33	1.07	.56	.31	.57	19.64

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	4,095	17.09
1951	1203	62,700	Dec. 8, 1950	650	4,522	1.39	18.89	4,013	16.76
1952	1235	49,600	Mar. 12, 1952	590	4,145	1.28	17.55	4,202	17.58
1953	1273	56,100	Feb. 22, 1953	450	5,546	1.09	14.79	3,261	13.61
1954	1333	62,700	Mar. 2, 1954	391	2,374	.750	9.91	3,277	13.69
1955	1383	65,900	Mar. 6, 1955	390	4,378	1.35	18.30	3,431	14.33
1956	1433	18,800	Mar. 15, 1956	445	1,947	.599	8.15	2,282	9.56
1957	1503	60,500	Apr. 6, 1957	384	3,717	1.14	15.55	4,049	16.93
1958	(a)	39,500	Mar. 31, 1958	678	4,585	1.41	19.12	3,967	16.55
1959	(a)	29,000	Sept. 30, 1959	459	2,311	.711	9.67	3,182	13.31
1960	(a)	58,300	Mar. 31, 1960	540	4,687	1.44	19.64	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

260. James River at Bent Creek, Va.

Location.--Lat 37°32', long 78°50', on left bank 100 ft downstream from highway bridge at town of Bent Creek, Appomattox County, 150 ft downstream from Bent Creek, 1 mile downstream from Gladstone, and at mile 222.9.

Drainage area.--3,671 sq mi.

Records available.--October 1924 to September 1960. Monthly discharge only for some periods, published in WSP 1303. Published as "at Bent Creek, near Gladstone" prior to 1926.

Gage.--Water-stage recorder. Datum of gage is 381.39 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Sept. 13, 1930, chain gage at same site and datum.

Average discharge.--36 years (1924-60), 4,144 cfs.

Extremes.--1924-60: Maximum discharge, 115,000 cfs Mar. 18, 1936 (gage height, 23.02 ft), from rating curve extended above 74,000 cfs on basis of velocity-area studies and records for other stations in James River basin; minimum, 222 cfs Oct. 13, 14, 1930 (gage height, 2.21 ft); minimum daily, 222 cfs Oct. 13, 1930.

Remarks.--Large diurnal fluctuation caused by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,585	1,966	9,159	3,139	9,254	8,002	12,373	4,010	7,103	2,184	1,247	942	5,040
1952	771	1,451	4,566	10,010	8,394	11,400	7,463	6,893	2,120	1,283	2,998	2,560	4,974
1953	1,186	2,595	3,858	6,717	8,996	11,850	5,816	4,677	2,360	1,476	937	792	4,248
1954	755	812	2,118	3,545	3,370	8,925	4,781	3,766	1,918	1,887	931	656	2,789
1955	3,943	4,164	6,264	4,316	7,829	16,240	5,940	2,579	2,269	1,177	3,426	1,431	4,958
1956	784	891	869	782	5,476	5,650	5,693	1,945	1,559	1,245	945	1,117	2,228
1957	1,891	2,540	2,643	4,205	10,850	6,714	9,979	3,548	2,776	1,137	667	2,909	4,096
1958	2,180	3,918	6,282	6,932	6,934	9,580	13,490	10,090	2,452	2,355	2,806	1,048	5,667
1959	921	960	1,788	3,128	2,406	4,720	9,269	3,335	4,432	1,581	1,326	1,151	2,894
1960	6,192	3,585	5,858	4,884	10,200	9,359	11,970	7,916	3,839	1,303	1,069	1,591	5,626

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.50	0.60	2.87	0.98	2.62	2.51	3.76	1.26	2.15	0.69	0.39	0.29	18.62
1952	.24	.44	1.43	3.15	2.47	3.58	2.26	2.10	.64	.40	.94	.78	18.43
1953	.37	.79	1.21	2.11	2.55	3.72	1.76	1.46	.72	.46	.29	.24	15.68
1954	.23	.25	.67	1.11	.96	2.80	1.45	1.19	.58	.59	.29	.19	10.31
1955	1.23	1.26	1.97	1.36	2.22	5.10	1.81	.81	.69	.37	1.08	.44	18.34
1956	.25	.27	.27	.25	1.61	1.78	1.73	.61	.47	.39	.30	.34	8.27
1957	.59	1.77	.83	1.33	3.08	2.11	3.04	1.11	.84	.36	.21	.88	15.15
1958	.68	1.19	1.97	2.18	1.97	3.01	4.10	3.17	.75	.74	.88	.32	20.96
1959	.29	.29	.56	.98	.68	1.48	2.82	1.05	1.35	.43	.42	.35	10.70
1960	1.94	1.09	1.84	1.53	3.00	2.94	3.64	2.49	1.17	.41	.34	.48	20.87

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950								4,507	16.65
1951	1203	60,900	Dec. 8, 1950	665	5,040	1.37	18.62	4,539	16.76
1952	1233	49,500	Mar. 12, 1952	567	4,974	1.35	18.43	5,043	18.69
1953	1273	56,700	Feb. 22, 1953	802	4,248	1.18	15.68	3,915	14.46
1954	1333	61,600	Mar. 2, 1954	445	2,789	1.760	10.31	3,689	13.62
1955	1383	65,100	Mar. 7, 1955	478	4,958	1.35	18.34	3,962	14.67
1956	1433	17,600	Mar. 15, 1956	500	2,228	.607	8.27	4,331	16.07
1957	1503	60,200	Apr. 6, 1957	440	4,096	1.12	15.15	4,542	16.80
1958	1553	41,200	Apr. 1, 1958	704	5,667	1.54	20.96	4,936	18.26
1959	1623	27,600	June 4, 1959	600	2,894	1.788	10.70	3,903	14.43
1960	1703	58,400	Mar. 31, 1960	765	5,626	1.53	20.87	-	-

270. Tye River near Lovingsston, Va.

Location.--Lat 37°43', long 76°58', on right bank at downstream side of highway bridge, 2 miles downstream from Hat Creek, 4 miles upstream from Piney River, and 6 miles southwest of Lovingsston, Nelson County.

Drainage area.--92 sq mi, approximately.

Records available.--August 1938 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 578.39 ft above mean sea level, datum of 1929, Culpeper supplementary adjustment of 1943.

Average discharge.--22 years (1938-60), 150 cfs.

Extremes.--1938-60: Maximum discharge, 9,670 cfs Sept. 19, 1944 (gage height, 13.7 ft); minimum, 3.2 cfs Sept. 13, 1954 (gage height, 0.56 ft); minimum gage height, 0.29 ft Oct. 4, 1943.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	66.9	71.4	410	122	322	256	367	134	358	110	53.5	25.7	190
1952	18.3	57.3	234	242	275	435	307	245	86.1	109	109	131	187
1953	44.4	166	198	266	323	424	248	174	79.9	32.6	23.4	15.4	187
1954	14.3	25.1	134	88.7	148	242	120	118	71.0	41.4	14.0	6.87	85.0
1955	45.4	176	227	137	220	339	275	119	181	44.5	350	80.9	183
1956	39.3	38.7	30.1	27.6	126	128	143	62.7	30.8	53.5	19.3	46.2	61.7
1957	97.0	169	107	128	306	222	414	177	148	48.7	19.2	63.6	157
1958	45.2	151	228	237	196	238	408	272	63.5	73.7	69.5	40.8	170
1959	29.2	28.9	90.1	134	89.0	146	249	86.6	189	71.2	54.5	104	107
1960	377	150	215	191	294	274	350	296	162	75.4	46.7	94.1	210

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.84	0.87	5.14	1.53	3.64	3.20	4.45	1.68	4.34	1.38	0.67	0.31	28.05
1952	.23	.70	2.93	3.03	3.22	5.45	3.73	3.07	1.04	1.36	1.36	1.58	27.70
1953	.56	2.01	2.48	3.61	3.69	5.32	3.01	2.18	.97	.41	.29	.20	24.73
1954	.18	.30	1.68	1.11	1.68	3.03	1.45	1.48	.86	.52	.18	.08	12.55
1955	.57	2.13	2.85	1.72	2.49	4.24	3.34	1.49	2.20	.56	4.38	.98	26.95
1956	.49	.47	.38	.35	1.48	1.60	1.73	.79	.37	.67	.24	.56	9.13
1957	1.21	2.05	1.34	1.60	3.47	2.78	5.02	2.21	1.80	.61	.24	.77	23.10
1958	.57	1.83	2.66	2.97	2.22	2.99	4.94	3.41	1.01	.92	.87	.49	25.08
1959	.37	.36	1.13	1.68	1.01	1.83	3.02	1.08	2.41	.89	.68	1.26	15.72
1960	4.73	1.82	2.70	2.40	3.45	3.44	4.24	3.71	1.86	.95	.59	1.14	31.13

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	146	21.63
1951	1203	4,700	Dec. 7, 1950	15	190	2.07	28.05	170	25.06
1952	1233	6,600	Mar. 11, 1952	11	187	2.03	27.70	195	28.89
1953	1273	3,150	Mar. 24, 1953	7.0	167	1.82	24.73	146	21.84
1954	1333	1,760	Mar. 1, 1954	3.2	85.0	.924	12.55	108	15.94
1955	1383	7,300	Aug. 18, 1955	5.6	183	1.39	26.95	154	22.74
1956	1433	2,560	July 20, 1956	7.0	61.7	.871	9.13	83.8	12.39
1957	1503	3,150	Feb. 26, 1957	9.8	157	1.71	23.10	161	23.76
1958	(a)	1,810	Apr. 23, 1958	23	170	1.85	25.08	147	21.68
1959	(a)	3,780	Sept. 30, 1959	23	107	1.16	15.72	157	23.11
1960	(a)	3,870	Oct. 24, 1959	28	210	2.28	31.13	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

275. Piney River at Piney River, Va.

Location (revised).--Lat 37°42'10", long 79°01'40", on right bank 20 ft downstream from bridge on State Highway 151, 0.2 mile southwest of Piney River Post Office, Nelson County, 1.7 miles downstream from Indian Creek, and 2.5 miles southeast of Lowesville.

Drainage area.--48 sq mi, approximately.

Records available.--July 1949 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 633.58 ft above mean sea level, datum of 1929, Culpeper supplementary adjustment of 1943.

Average discharge.--11 years (1949-60), 87.3 cfs.

Extremes.--1949-60: Maximum discharge, 4,930 cfs Aug. 18, 1955 (gage height, 7.90 ft); minimum, 1.8 cfs Sept. 18, 1954; minimum gage height, 0.71 ft Oct. 13, 14, 1954. Flood in June 1949 reached a stage of 9.9 ft, from floodmarks.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	34.0	35.5	225	58.8	176	132	213	77.9	222	39.9	18.7	9.27	103
1952	9.62	21.5	118	132	163	234	159	134	38.9	42.5	70.0	90.7	101
1953	23.0	91.4	117	165	200	256	138	99.5	43.6	16.5	8.76	5.60	96.5
1954	5.97	10.7	75.7	53.2	89.3	148	71.1	53.7	31.3	15.7	6.56	4.37	46.9
1955	19.3	143	152	95.2	132	229	199	65.6	99.6	29.6	223	60.1	120
1956	20.4	19.1	15.9	14.0	80.7	79.7	88.2	36.4	15.9	27.6	16.6	19.2	35.9
1957	47.2	107	56.1	70.3	210	152	238	91.5	83.5	28.0	8.34	35.0	92.7
1958	43.5	91.1	127	143	102	125	229	139	42.8	33.3	42.7	23.0	95.0
1959	14.7	14.6	34.7	78.8	54.7	85.3	159	50.8	160	29.4	25.6	75.8	84.9
1960	281	85.1	106	91.3	150	137	202	202	97.8	60.3	29.9	43.1	124

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.82	0.83	5.41	1.41	3.82	3.17	4.95	1.87	5.16	0.96	0.45	0.22	29.07
1952	.23	.50	2.84	3.17	3.67	5.63	3.69	3.22	.90	1.02	1.68	2.11	28.66
1953	.55	2.12	2.81	3.97	4.34	6.14	3.21	2.39	1.01	.40	.21	.13	27.28
1954	.14	.25	1.82	1.28	1.94	3.55	1.85	1.29	.73	.38	.16	.10	13.29
1955	.46	3.32	3.66	2.28	2.86	5.50	4.63	1.58	2.32	.71	5.36	1.40	34.08
1956	.49	.44	.39	.34	1.81	1.91	2.05	.87	.37	.66	.40	.45	10.18
1957	1.13	2.49	1.35	1.68	4.56	3.66	5.53	2.20	1.94	.67	.20	.81	26.22
1958	1.04	2.12	3.06	3.44	2.21	3.00	5.32	3.34	1.00	.80	1.03	.53	26.89
1959	.35	.34	.83	1.89	1.19	2.05	3.69	1.22	3.72	.68	.61	1.76	18.33
1960	6.74	1.98	2.55	2.19	3.36	3.29	4.70	4.85	2.28	1.45	.72	1.00	35.11

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	88.6	25.08	
1951	1203	2,740	Dec. 7, 1950	6.8	103	2.15	29.07	90.5	25.58	
1952	1233	1,930	Mar. 11, 1952	6.0	101	2.10	28.66	108	30.57	
1953	1273	1,570	Mar. 24, 1953	3.0	96.5	2.01	27.28	84.9	24.01	
1954	1333	608	Mar. 1, 1954	1.9	46.9	.977	13.29	65.4	18.52	
1955	1383	4,930	Aug. 18, 1955	2.8	120	2.50	34.08	98.9	27.95	
1956	1433	720	July 20, 1956	5.8	35.9	.748	10.18	48.8	13.83	
1957	1503	1,700	Feb. 26, 1957	5.5	92.7	1.93	26.22	37.1	27.47	
1958	(a)	698	Apr. 23, 1958	9.1	95.0	1.98	26.89	78.4	22.19	
1959	(a)	2,800	Sept. 30, 1959	6.6	64.9	1.35	18.33	99.4	28.08	
1960	(a)	3,180	July 27, 1960	14	124	2.58	35.11	-	-	

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

280. Buffalo River near Norwood, Va.

Location.--Lat 37°38', long 78°53', on right bank 1 mile downstream from Tye River, 3 miles upstream from Rucker Run, and 4½ miles (revised) upstream from mouth and Norwood, Nelson County.

Drainage area.--360 sq mi.

Records available.--March 1940 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 400.78 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--20 years (1940-60), 474 cfs.

Extremes.--1940-60: Maximum discharge, 33,500 cfs Oct. 15, 1942, Sept. 19, 1944 (gage height, 18.1 ft, from floodmarks), from rating curve extended above 13,000 cfs on basis of slope-area measurement at gage height 12.05 ft and logarithmic plotting; minimum, 23 cfs Oct. 8, 9, 1954; minimum gage height, 1.64 ft Oct. 10, 1941.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	222	218	907	332	865	696	1,086	432	987	315	170	107	524
1952	92.6	176	718	897	990	1,277	868	735	282	551	414	533	613
1953	174	478	525	882	885	1,270	822	521	351	165	118	78.9	519
1954	84.2	101	507	421	477	716	364	323	207	133	80.8	41.0	287
1955	158	554	740	444	679	1,104	814	334	475	183	916	281	556
1956	138	127	118	113	439	375	455	203	123	149	91.6	113	202
1957	209	427	295	378	878	672	1,087	500	391	151	64.9	250	437
1958	184	410	616	717	584	798	1,108	781	290	235	227	140	507
1959	119	126	239	373	254	428	724	258	454	170	165	257	295
1960	929	398	579	521	919	767	1,010	904	488	239	161	261	597

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.71	0.68	2.90	1.06	2.50	2.22	3.37	1.38	3.06	1.01	0.54	0.33	19.76
1952	.30	.55	2.29	2.87	2.97	4.09	2.76	2.35	.87	1.12	1.35	1.65	23.15
1953	.56	1.48	1.68	2.82	2.56	4.07	2.54	1.67	1.03	.53	.38	.24	19.56
1954	.27	.31	1.63	1.35	1.38	2.29	1.13	1.03	.64	.43	.26	.13	10.85
1955	.51	1.72	2.38	1.42	1.97	3.54	2.52	1.07	1.47	.59	2.93	.87	20.99
1956	.44	.39	.38	.36	1.32	1.20	1.41	.65	.38	.48	.29	.35	7.65
1957	.67	1.33	.94	1.21	2.54	2.18	3.37	1.80	1.22	.48	.21	.77	16.50
1958	.59	1.27	1.97	2.29	1.69	2.56	3.44	2.50	.90	.75	.73	.43	19.12
1959	.58	.39	.77	1.20	.74	1.37	2.24	.83	1.35	.54	.53	.80	11.14
1960	2.97	1.24	1.86	1.67	2.75	2.46	3.14	2.89	1.52	.77	.52	.81	22.60

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	458	17.24
1951	1203	8,170	June 13, 1951	78	524	1.46	19.76	494	18.61
1952	1233	7,770	Mar. 11, 1952	70	613	1.70	23.15	628	23.72
1953	1273	6,270	Mar. 24, 1953	40	519	1.44	19.56	479	18.05
1954	1333	3,490	Dec. 14, 1953	26	287	.797	10.85	351	13.25
1955	1383	17,600	Aug. 18, 1955	26	556	1.54	20.99	466	17.59
1956	1433	2,110	Apr. 16, 1956	34	202	.561	7.65	248	9.38
1957	1503	4,540	Feb. 28, 1957	37	437	1.21	16.50	461	17.39
1958	(a)	3,810	Apr. 22, 1958	94	507	1.41	19.12	446	16.83
1959	(a)	3,090	Dec. 29, 1958	67	295	.819	11.14	415	15.67
1960	(a)	6,270	May 8, 1960	86	597	1.66	22.60	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

285. Rockfish River near Greenfield, Va.

Location.--Lat 37°52'10", long 78°49'25" on left bank 50 ft downstream from bridge on State Highway 634, 2.8 miles downstream from confluence of North and South Forks, and 4.1 miles south of Greenfield, Nelson County.

Drainage area.--96 sq mi, approximately.

Records available.--April 1943 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 530.29 ft above mean sea level, datum of 1929, Culpeper supplementary adjustment of 1943. Prior to Aug. 21, 1943, wire-weight gage at same site and datum.

Average discharge.--17 years (1943-60), 135 cfs.

Extremes.--1943-60: Maximum discharge, 13,700 cfs Sept. 19, 1944 (gage height, 17.2 ft), from rating curve extended above 8,500 cfs on basis of slope-area measurements at gage heights 17.2 and 23.4 ft and peak runoff comparison with nearby stations; minimum, 1.6 cfs Oct. 1, 2, 1954; minimum gage height, 1.25 ft Sept. 17, 18, 19, 1946, Sept. 16, 17, 1954.

Flood of Oct. 15, 1942, reached a stage of 23.4 ft, from floodmarks (discharge, about 30,000 cfs).

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	65.8	67.8	445	123	295	254	289	98.3	257	88.2	42.5	22.5	170
1952	15.5	55.6	226	221	305	392	303	229	82.9	54.0	86.5	88.6	171
1953	39.4	154	145	251	265	432	226	139	66.4	28.8	20.1	10.8	148
1954	12.2	17.9	88.8	70.8	103	216	112	99.6	50.7	28.0	8.47	3.34	67.5
1955	32.3	128	200	126	182	274	234	77.3	87.3	34.3	474	85.9	161
1956	35.2	33.7	27.3	26.4	109	97.3	102	47.0	23.1	64.7	15.4	71.3	54.1
1957	147	193	91.8	106	262	209	374	99.7	147	38.6	14.9	52.0	143
1958	43.4	121	178	217	176	242	345	211	71.1	60.3	57.5	25.6	145
1959	25.4	27.6	69.6	106	64.7	111	200	66.3	155	68.7	49.4	192	94.5
1960	307	118	179	162	291	259	312	194	126	56.0	48.6	83.4	178

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.79	0.79	5.35	1.48	3.20	3.06	3.36	1.18	2.99	1.06	0.51	0.26	24.03
1952	.19	.65	2.71	2.65	3.43	4.70	3.53	2.76	.96	.65	1.04	1.03	24.30
1953	.47	1.78	1.74	3.01	2.87	5.19	2.62	1.67	.77	.35	.24	.12	20.83
1954	.15	.21	1.07	.85	1.11	2.59	1.30	1.20	.59	.34	.10	.04	9.55
1955	.39	1.48	2.40	1.51	1.98	3.29	2.72	.93	1.01	.41	5.70	1.00	22.82
1956	.42	.39	.33	.32	1.23	1.16	1.18	.58	.27	.78	.18	.83	7.66
1957	1.76	2.24	1.10	1.27	2.84	2.51	4.35	1.20	1.71	.46	.18	.60	20.22
1958	.52	1.41	2.13	2.61	1.91	2.91	4.01	2.54	.83	.72	.69	.30	20.58
1959	.31	.32	.84	1.27	.70	1.34	2.32	.82	1.80	.83	.59	2.23	13.37
1960	3.69	1.37	2.14	1.95	3.27	3.11	3.63	2.33	1.46	.67	.58	.97	25.17

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	138	19.58
1951	1203	5,260	Dec. 4, 1950	11	170	1.77	24.03	146	20.65
1952	1233	6,840	Mar. 11, 1952	10	171	1.78	24.30	175	24.74
1953	1273	3,040	Mar. 25, 1953	5.2	148	1.54	20.83	129	18.27
1954	1333	1,460	Mar. 1, 1954	2.0	67.5	.703	9.55	87.7	12.39
1955	1393	12,200	Aug. 18, 1955	1.6	161	1.68	22.82	139	19.69
1956	1433	2,560	July 20, 1956	4.0	54.1	.564	7.66	82.0	11.61
1957	1503	2,210	Apr. 5, 1957	5.2	143	1.49	20.22	136	19.18
1958	(a)	1,840	Apr. 23, 1958	17	145	1.51	20.58	127	17.99
1959	(a)	7,860	Sept. 30, 1959	16	94.5	.984	13.37	135	19.10
1960	(a)	2,140	Oct. 24, 1959	20	178	1.85	25.17	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

290. James River at Scottsville, Va.

Location.--Lat 37°47'50", long 78°29'30", on left bank 50 ft downstream from highway bridge at Scottsville, Albemarle County, 6.8 miles upstream from Hardware River, and at mile 184.6.

Drainage area.--4,571 sq mi.

Records available.--October 1924 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 253.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 28, 1928, chain gage at same site and datum.

Average discharge.--36 years (1924-60), 5,100 cfs.

Extremes.--1924-60: Maximum discharge, 133,000 cfs Sept. 19, 1944 (gage height, 26.0 ft); minimum, 302 cfs Oct. 1, 1930 (gage height, 1.46 ft); minimum daily, 307 cfs Oct. 15, 1930.

Data for some outstanding floods prior to the establishment of this station are given in the following table:

Date	Discharge (cfs)	Gage height (feet)	Remarks
October 1870.....	30.7	-	Gage height from information by local resident.
November 1877.....	27.9	a160,000	Do.
March 1913.....	25.16	121,000	From floodmarks.
a About.			

Remarks.--Large diurnal fluctuation caused by powerplants above station. Records of chemical analyses for the period October 1951 to September 1952; suspended sediment loads for the period December 1950 to September 1956; and water temperatures for the period May 1951 to September 1956, are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,154	2,493	11,423	3,930	10,895	9,180	14,988	5,055	9,113	2,923	1,661	1,080	6,196
1952	928	2,148	6,075	11,070	10,350	14,260	9,336	8,112	2,643	1,973	3,706	3,626	6,182
1953	1,493	3,673	4,898	8,343	10,520	14,390	7,421	5,739	2,907	1,699	1,100	815	5,224
1954	810	931	2,940	4,117	3,972	10,140	5,480	4,408	2,309	2,023	998	637	3,234
1955	4,217	5,317	7,059	5,423	8,674	18,600	7,370	3,190	2,961	1,461	5,909	1,854	5,998
1956	1,111	1,201	1,178	1,002	5,771	5,962	6,337	2,262	1,690	1,380	922	1,142	2,477
1957	2,153	3,641	3,470	4,845	12,690	8,137	12,260	4,525	3,663	1,412	764	5,115	4,992
1958	2,275	4,063	8,860	7,663	7,545	10,370	15,150	11,280	2,992	2,607	3,084	1,269	6,257
1959	1,021	1,078	2,093	3,631	2,716	4,912	10,020	3,609	5,067	1,517	1,414	1,508	3,207
1960	7,739	4,129	6,521	5,487	11,300	10,240	14,350	9,265	4,607	1,614	1,335	2,054	6,531

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.54	0.61	2.88	0.99	2.48	2.32	3.66	1.28	2.22	0.74	0.42	0.26	16.40
1952	.23	.52	1.53	2.79	2.44	3.60	2.28	2.04	.64	.50	.94	.88	18.39
1953	.38	.90	1.23	2.10	2.40	3.63	1.81	1.45	.71	.43	.28	.20	15.52
1954	.20	.23	.74	1.04	.90	2.56	1.34	1.11	.56	.51	.25	.16	9.60
1955	1.06	1.29	1.78	1.37	1.98	4.69	1.80	.80	.72	.37	1.49	.45	17.80
1956	.28	.29	.30	.25	1.36	1.50	1.55	.57	.41	.35	.23	.28	7.37
1957	.54	.89	.88	1.22	2.90	2.06	2.99	1.14	.89	.36	.19	.76	14.82
1958	.57	.99	1.73	1.94	1.72	2.62	3.69	2.85	.73	.66	.78	.31	16.89
1959	.26	.26	.53	.92	.62	1.24	2.45	.91	1.24	.38	.36	.37	9.54
1960	1.95	1.01	1.65	1.38	2.67	2.58	3.50	2.34	1.13	.41	.34	.50	19.46

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	5,579	16.56
1951	1203	64,900	Dec. 9, 1950	800	6,196	1.36	18.40	5,609	16.65
1952	1233	54,500	Mar. 13, 1952	673	6,182	1.35	18.39	6,255	18.62
1953	1273	67,000	Mar. 25, 1953	612	5,224	1.14	15.52	4,774	14.18
1954	1333	62,900	Mar. 3, 1954	474	5,234	1.14	9.60	4,234	12.56
1955	1383	70,100	Mar. 7, 1955	504	5,998	1.31	17.80	4,897	14.54
1956	1433	20,400	Apr. 16, 1956	462	2,477	.542	7.37	2,960	6.81
1957	1503	64,200	Apr. 7, 1957	558	4,992	1.09	14.82	5,325	15.80
1958	1553	44,500	Apr. 1, 1958	818	6,257	1.37	18.59	5,500	16.35
1959	1623	29,300	June 3, 1959	665	3,207	.702	9.54	4,404	13.10
1960	1703	64,200	Apr. 1, 1960	900	6,531	1.43	19.46	-	-

300. Hardware River below Briery Run, near Scottsville, Va.

Location.--Lat 37°48'45", long 78°27'20", on left bank 75 ft upstream from highway bridge, 0.8 mile downstream from Briery Run, 2.4 miles northeast of Scottsville, Albemarle County, and 10.8 miles upstream from mouth.

Drainage area.--116 sq mi.

Records available.--October 1938 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 294.96 ft above mean sea level, datum of 1929, Culpeper supplementary adjustment of 1943.

Average discharge.--22 years (1938-60), 119 cfs.

Extremes.--1938-60: Maximum discharge, 23,000 cfs Sept. 19, 1944 (gage height, 23.8 ft, from floodmark in gage house), from rating curve extended above 11,000 cfs on basis of slope-area measurement of peak flow; minimum, 2.8 cfs Oct. 1, 1941 (gage height, 1.34 ft); minimum daily, 4.8 cfs Oct. 6, 1941.

Remarks.--Prior to November 1947, occasional small diurnal fluctuation at low flow caused by dam and gristmill 2.5 miles above station.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	82.1	71.6	230	94.4	194	214	232	118	256	118	69.1	52.9	144
1952	59.3	109	270	221	380	541	340	275	105	94.5	121	115	217
1953	57.0	201	123	211	180	326	216	132	76.5	37.6	28.2	18.2	133
1954	20.9	27.0	75.7	71.9	50.3	170	87.1	66.5	38.9	23.8	11.2	7.93	54.5
1955	30.9	61.8	162	72.7	136	186	179	78.4	62.6	38.2	345	52.3	117
1956	38.7	43.3	37.5	36.6	89.4	79.5	92.5	42.4	24.2	32.5	14.3	31.7	46.6
1957	65.1	112	83.5	78.2	151	127	198	73.6	78.6	22.5	13.6	37.4	86.0
1958	40.0	67.6	125	178	155	229	217	187	107	87.4	59.5	35.0	124
1959	54.7	37.9	58.5	61.8	55.5	101	147	56.2	117	80.7	85.0	68.8	76.7
1960	201	61.5	143	131	258	197	265	156	103	54.1	62.2	86.3	144

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.82	0.69	2.28	0.94	1.74	2.12	2.23	1.18	2.47	1.18	0.69	0.51	16.85
1952	.39	1.05	2.69	2.20	3.54	5.37	3.27	2.71	1.01	.94	1.20	1.11	25.48
1953	.57	1.93	1.22	2.10	1.61	3.24	2.08	1.31	.74	.38	.28	.18	15.64
1954	.21	.26	.75	.71	.45	1.70	.84	.66	.37	.24	.11	.08	6.38
1955	.31	.59	1.61	.72	1.22	1.84	1.72	.78	.60	.38	3.42	.50	13.69
1956	.39	.42	.37	.36	.83	.79	.89	.42	.23	.32	.14	.30	5.46
1957	.65	1.08	.83	.78	1.35	1.26	1.91	.73	.76	.22	.13	.36	10.06
1958	.40	.65	1.24	1.76	1.40	2.27	2.09	1.86	1.03	.87	.59	.34	14.50
1959	.34	.36	.58	.81	.48	1.00	1.42	.56	1.13	.80	.83	.66	8.97
1960	1.99	.78	1.42	1.30	2.39	1.96	2.54	1.54	.99	.54	.62	.83	16.90

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	122	14.31
1951	1203	3,200	June 10, 1951	34	144	1.24	16.85	147	17.19
1952	1233	3,400	Mar. 11, 1952	33	217	1.87	25.48	214	25.07
1953	1333	2,440	Nov. 20, 1952	12	133	1.15	15.64	112	13.14
1954	1333	2,660	Mar. 1, 1954	6.2	54.5	.470	6.38	65.5	7.67
1955	1383	6,800	Aug. 18, 1955	7	117	1.01	13.69	106	12.36
1956	1433	622	July 21, 1956	7.8	46.6	.402	5.46	58.4	6.84
1957	1503	1,520	Apr. 6, 1957	9.0	86.0	.741	10.06	83.8	9.79
1958	(a)	1,340	Mar. 31, 1958	20	124	1.07	14.50	115	13.49
1959	(a)	2,010	June 3, 1959	22	76.7	.661	8.97	102	11.88
1960	(a)	5,760	Oct. 1, 1959	28	144	1.24	16.90	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

305. Slate River near Arvonias, Va.

Location--Lat 37°42'10", long 78°22'40", on left bank 100 ft upstream from Bumpers Bridge, 1.8 miles northwest of Arvonias, Buckingham County, 2.9 miles upstream from Hunts Creek, and 3.8 miles upstream from mouth.

Drainage area--235 sq mi.

Records available--April 1926 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage--Water-stage recorder. Datum of gage is 238.78 ft above mean sea level (levels by Corps of Engineers). Prior to Sept. 18, 1935, chain gage and Sept. 18, 1935, to Feb. 14, 1936, staff gage, at same site and datum.

Average discharge--34 years (1926-60), 222 cfs.

Extremes--1926-60: Maximum discharge, 13,600 cfs Sept. 6, 1935 (gage height, 22.18 ft, from floodmarks), from rating curve extended above 5,200 cfs on basis of velocity-area studies; minimum, 2 cfs Sept. 28 to Oct. 2, 1930.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	136	130	328	176	320	313	381	158	184	102	63.3	51.7	194
1952	55.4	247	471	494	423	585	415	219	103	115	165	179	289
1953	71.9	326	187	333	240	431	352	215	124	57.4	51.5	24.3	201
1954	38.5	50.8	220	301	127	344	270	279	105	58.4	38.3	16.5	155
1955	74.9	123	283	109	293	384	254	131	107	98.7	800	115	231
1956	63.0	72.1	67.1	70.5	171	165	236	111	65.7	33.4	24.2	64.7	94.8
1957	110	218	225	195	373	251	418	111	121	45.9	27.1	49.6	177
1958	48.3	138	225	346	345	383	391	307	116	77.3	94.1	51.1	209
1959	50.4	55.6	246	159	111	212	434	101	84.1	53.3	118	89.6	143
1960	162	152	181	204	587	383	433	211	148	61.4	89.9	147	228

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.67	0.62	1.61	0.86	1.42	1.53	1.81	0.77	0.87	0.50	0.31	0.25	11.22
1952	.27	1.17	2.31	2.42	1.84	2.87	1.98	1.07	.48	.56	.81	.85	16.74
1953	.35	1.55	.92	1.64	1.06	2.11	1.87	1.05	.59	.28	.25	.11	11.58
1954	.19	.24	1.08	1.48	.56	1.68	1.28	1.37	.50	.29	.19	.08	8.94
1955	.37	.58	1.38	.53	1.30	1.88	1.20	.64	.51	.48	3.92	.55	13.34
1956	.31	.34	.33	.36	.79	.81	1.12	.54	.31	.16	.12	.31	5.50
1957	.54	1.04	1.10	.96	1.66	1.23	1.99	.54	.57	.22	.13	.24	10.22
1958	.24	.65	1.10	1.70	1.53	1.88	1.85	1.51	.55	.38	.46	.24	12.09
1959	.25	.26	1.21	.78	1.49	1.04	2.06	.49	.40	.26	.58	.43	8.25
1960	.79	.72	.89	1.00	2.69	1.88	2.06	1.03	.70	.30	.44	.70	13.20

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	228	13.18
1951	1203	3,040	Dec. 4, 1950	35	194	0.826	11.22	209	12.07
1952	1233	4,720	Dec. 22, 1951	33	289	1.23	16.74	273	15.81
1953	1273	3,780	Nov. 20, 1952	16	201	.855	11.58	176	10.27
1954	1333	4,350	Mar. 1, 1954	10	155	.660	8.94	169	9.76
1955	1383	6,490	Aug. 19, 1955	8.8	231	.983	13.34	208	11.99
1956	1433	1,840	Apr. 16, 1956	9.7	94.8	.403	5.50	124	7.20
1957	1503	3,340	Apr. 5, 1957	15	177	.753	10.22	165	9.53
1958	1553	2,440	Feb. 27, 1958	34	209	.889	12.09	205	11.82
1959	1623	4,050	Dec. 29, 1958	23	143	.608	8.25	155	8.93
1960	1703	4,050	Feb. 19, 1960	39	228	.970	13.20	-	-

310. Mechum River near Ivy, Va.

Location--Lat 38°06'15", long 78°35'35", at State Highway 614, 2.6 miles downstream from Spring Creek, 3.3 miles north of town of Ivy, Albemarle County, and 4.7 miles upstream from confluence with Moorman's River.

Drainage area--97 sq mi, approximately.

Records available--October 1942 to September 1951.

Gage--Water-stage recorder. Altitude of gage is 440 ft (from topographic map).

Average discharge--9 years (1942-51), 105 cfs.

Extremes--1942-51: Maximum discharge, 20,000 cfs Oct. 15, 1942 (gage height, 30.3 ft, from floodmark), from rating curve extended above 8,000 cfs by logarithmic plotting; minimum, 0.6 cfs Sept. 9, 1944 (gage height, 0.51 ft).

Flood of Sept. 30, 1959, reached a stage of 18.05 ft, from floodmarks in gage well (discharge, 7,200 cfs).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	58.4	68.4	287	85.8	209	194	190	105	151	65.4	35.6	23.3	122

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.69	0.79	3.41	1.02	2.24	2.31	2.19	1.24	1.74	0.78	0.42	0.27	17.10

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	108	15.06
1951	1203	5,980	Dec. 4, 1950	14	122	1.26	17.10	-	-

315. North Fork Moormans River near Whitehall, Va.

Location.--Lat 38°08'25", long 78°45'05", on left bank 0.5 mile upstream from confluence with South Fork, 0.8 mile upstream from city of Charlottesville dam, and 5.1 miles west of Whitehall, Albemarle County.

Drainage area.--11.4 sq mi.

Records available.--December 1951 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 999 ft (by barometer). Concrete control November 1952 to August 1955.

Average discharge.--8 years (1952-60), 15.2 cfs.

Extremes.--1951-60: Maximum discharge, 2,400 cfs Aug. 18, 1955 (gage height, 7.94 ft), from rating curve extended above 500 cfs on basis of slope-area measurement at 11.7 ft; no flow at times in October 1953 and October 1954.
Flood of Oct. 15, 1942, reached a stage of 11.7 ft, from floodmarks (discharge, 7,620 cfs, by slope-area measurement of peak flow).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	34.3	39.6	45.9	56.2	33.0	9.13	8.27	5.19	13.2	-
1953	1.84	22.4	18.5	33.4	23.2	62.3	29.5	13.5	2.64	.405	.271	.066	17.3
1954	.390	.861	3.47	4.72	8.15	32.1	13.7	14.5	6.25	2.99	.130	.034	7.29
1955	6.06	24.5	23.9	11.1	10.1	34.5	22.2	9.42	12.1	2.54	82.9	6.53	20.6
1956	2.07	2.21	1.57	1.32	14.7	14.9	18.2	5.10	3.57	4.65	3.29	8.68	6.63
1957	35.1	25.0	12.3	8.43	43.5	25.7	35.4	9.16	8.23	1.05	.203	.847	16.9
1958	3.53	7.88	24.2	30.2	24.2	43.5	69.1	35.5	3.98	2.63	1.63	.55	20.4
1959	.97	1.58	16.5	15.3	7.52	14.7	31.5	6.93	10.5	1.96	1.86	11.0	9.97
1960	43.8	10.7	19.4	13.6	25.4	41.1	33.4	60.3	10.0	2.05	2.15	10.1	22.7

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	3.47	3.74	4.65	5.50	3.33	0.89	0.84	0.52	1.29	-
1953	0.19	2.19	1.87	3.38	2.12	6.30	2.89	1.36	.26	.04	.03	.007	20.64
1954	.04	.08	.35	.48	.74	3.25	1.34	1.46	.61	.30	.01	.003	8.66
1955	.61	2.40	2.42	1.12	.92	3.49	2.18	.95	1.18	.26	8.38	.64	24.55
1956	.21	.22	.16	.13	1.39	1.51	1.78	.52	.35	.47	.33	.85	7.92
1957	3.55	2.44	1.24	.85	3.98	2.59	3.47	.93	.81	.11	.02	.08	20.07
1958	.36	.77	2.44	3.06	2.21	4.40	6.76	3.39	.39	.27	.16	.05	24.26
1959	.10	.13	1.66	1.54	.69	1.48	3.08	.70	1.01	.20	.19	1.08	11.86
1960	4.43	1.05	1.96	1.38	2.40	4.16	3.27	6.10	.98	.21	.22	.99	27.15

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	1233	437	Feb. 4, 1952	-	-	-	-	23.9	28.48
1953	1273	492	Mar. 24, 1953	0.01	17.3	1.52	20.64	14.2	16.86
1954	1333	603	Mar. 1, 1954	0	7.29	.639	8.66	11.5	13.62
1955	1383	2,400	Aug. 18, 1955	0	20.6	1.81	24.55	16.6	19.71
1956	1433	158	July 20, 1956	.50	8.63	.582	7.92	12.2	14.56
1957	1503	520	Feb. 26, 1957	.05	16.9	1.47	20.07	13.8	16.41
1958	1553	350	Apr. 23, 1958	.2	20.4	1.79	24.26	19.0	22.58
1959	1623	1,180	Sept. 30, 1959	.4	9.97	.875	11.86	14.6	17.41
1960	1703	1,050	May 8, 1960	a.6	22.7	1.99	27.15	-	-

a Average for 5-day period.

325. South Fork Rivanna River near Earlysville, Va.

Location.--Lat 38°07'30", long 78°31'05", on left bank 0.3 mile upstream from Fishing Creek, 3.0 miles southwest of Earlysville, Albemarle County, and 8.7 miles upstream from confluence with North Fork.

Drainage area.--216 sq mi.

Records available.--December 1951 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 369 ft (by barometer).

Average discharge.--8 years (1952-60), 198 cfs (unadjusted).

Extremes.--1951-60: Maximum discharge, 30,200 cfs Aug. 18, 1955 (gage height, 26.1 ft), from rating curve extended above 6,600 cfs on basis of contracted-opening measurement of peak flow; minimum observed, 2.2 cfs Sept. 18, 1954 (gage height, 0.71 ft). Flood in October 1942 reached a stage of about 33 ft, from information by local resident.

Remarks.--Some diurnal fluctuation, mostly at medium flow, caused by city of Charlottesville reservoir on Moormans River. Records of discharge do not include diversions for Charlottesville municipal water supply which averages about 6 cfs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	356	495	584	552	414	156	206	107	150	-
1953	62.6	282	237	437	365	762	369	269	129	49.0	24.7	14.6	250
1954	32.4	39.5	122	113	118	423	150	138	62.9	25.5	9.14	5.65	103
1955	76.5	198	290	146	190	464	291	115	116	42.9	1507	114	260
1956	60.6	59.9	56.6	55.2	158	155	143	58.3	32.6	94.4	32.8	134	86.1
1957	206	252	131	128	415	342	455	117	117	27.1	8.94	45.1	185
1958	71.3	107	256	356	510	534	574	410	110	111	74.1	49.7	247
1959	49.4	53.6	134	179	94.0	182	328	101	264	77.6	121	261	153
1960	575	160	270	226	552	452	493	447	173	61.2	75.7	165	303

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	1.90	2.47	3.11	2.86	2.21	0.81	1.10	0.57	0.77	-
1953	0.33	1.46	1.27	2.33	1.76	4.07	1.91	1.44	.67	.26	.13	.08	15.71
1954	.17	.20	.65	.60	.57	2.26	.77	.74	.32	.14	.05	.03	6.50
1955	.41	1.02	1.54	.78	.92	2.48	1.51	.61	.60	.23	5.64	.59	16.33
1956	.32	.31	.30	.30	.79	.83	.74	.31	.17	.50	.18	.69	5.44
1957	1.10	1.30	.70	.68	2.00	1.82	2.24	.62	.60	.14	.05	.23	11.48
1958	.38	.55	1.37	1.90	1.50	2.85	2.97	2.19	.57	.59	.40	.26	15.53
1959	.26	.28	.72	.96	.45	.97	1.69	.54	1.37	.41	.65	1.35	9.65
1960	5.07	.83	1.44	1.21	2.76	2.41	2.55	2.38	.89	.33	.40	.85	19.12

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	1233	7,480	Mar. 11, 1952	-	-	-	-	299	16.86
1953	1273	5,750	Mar. 25, 1953	7.2	250	1.16	15.71	217	13.67
1954	1333	9,560	Mar. 1, 1954	2.2	103	1.477	6.50	135	8.45
1955	1363	30,200	Aug. 18, 1955	3.0	260	1.20	16.33	277	14.29
1956	1433	3,480	Sept. 27, July 20	6.2	86.1	.399	5.44	121	7.61
1957	1503	3,300	Feb. 26, 1957	2.5	183	.847	11.48	170	10.68
1958	1553	2,860	Mar. 31, 1958	24	247	1.14	15.53	230	14.49
1959	1623	25,500	Sept. 30, 1959	15	153	.708	9.65	218	13.73
1960	1703	6,010	Feb. 18, 1960	27	303	1.40	19.12	-	-

JAMES RIVER BASIN

340. Rivanna River at Palmyra, Va.

Location.--Lat 37°51'28", long 78°15'58", on left bank 10 ft upstream from highway bridge at Palmyra, Fluvanna County, 0.5 mile upstream from Cunningham Creek, and 15 miles upstream from mouth.

Drainage area.--675 sq mi.

Records available.--October 1933 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 210.39 ft above mean sea level, datum of 1929, Culpeper supplementary adjustment of 1943. Prior to Oct. 24, 1942, water-stage recorder at site 200 ft downstream at same datum. Oct. 24, 1942, to Dec. 18, 1947, wire-weight gage on upstream side of highway bridge 10 ft downstream at same datum.

Average discharge.--27 years (1933-60), 697 cfs.

Extremes.--1933-60: Maximum discharge, 78,000 cfs Oct. 16, 1942 (gage height, 36.5 ft at site then in use, 37.4 ft at present site); minimum, 11 cfs Sept. 14, 15, 1954 (gage height, 2.36 ft); minimum gage height, 1.53 ft Oct. 9, 1941, site then in use.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	455	482	1,536	516	1,325	1,208	1,418	540	1,491	370	202	131	801
1952	109	451	1,205	1,111	1,327	1,742	1,583	1,142	482	572	311	460	874
1953	203	971	657	1,249	1,054	1,977	1,100	840	438	173	93.8	47.7	732
1954	72.1	97.1	364	334	302	1,029	476	484	218	99.7	30.5	19.1	295
1955	251	420	927	398	620	1,328	827	381	401	158	2,517	286	713
1956	194	213	177	164	486	437	424	212	121	320	111	271	260
1957	417	691	459	428	1,078	994	1,184	379	337	87.0	40.9	154	515
1958	256	358	885	1,105	892	1,528	1,501	1,085	367	355	299	162	730
1959	180	183	363	493	310	593	951	342	760	272	447	384	438
1960	1,356	488	799	702	1,692	1,168	1,563	957	454	215	269	437	838

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.78	0.80	2.63	0.88	2.04	2.06	2.34	0.92	2.47	0.63	0.34	0.22	16.11
1952	.19	.75	2.06	1.90	2.12	2.97	2.62	1.95	.80	.98	.53	.76	17.63
1953	.35	1.61	1.12	2.13	1.62	3.38	1.82	1.43	.72	.30	.16	.08	14.72
1954	.12	.16	.62	.57	.47	1.75	.79	.83	.36	.17	.05	.03	5.92
1955	.43	.69	1.58	.68	.96	2.26	1.37	.65	.66	.27	4.30	.47	14.32
1956	.33	.35	.30	.28	.78	.75	.70	.36	.20	.55	.19	.45	5.24
1957	.71	1.14	.78	.73	1.67	1.70	1.95	.65	.56	.15	.07	.25	10.36
1958	.44	.59	1.46	1.89	1.38	2.61	2.48	1.66	.61	.61	.51	.27	14.71
1959	.27	.30	.62	.84	.48	1.01	1.57	.58	1.26	.46	.76	.63	8.78
1960	2.32	.80	1.36	1.20	2.70	1.99	2.58	1.64	.75	.37	.46	.72	16.89

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	696	14.02
1951	1203	17,000	Dec. 5, 1950	80	801	1.19	16.11	741	14.90
1952	1233	11,400	Mar. 12, 1952	76	874	1.29	17.63	878	17.71
1953	1273	9,800	Nov. 20, 1952	40	732	1.08	14.72	624	12.54
1954	1333	9,800	Mar. 2, 1954	12	295	.437	5.92	384	7.72
1955	1363	34,800	Aug. 19, 1955	13	713	1.06	14.32	627	12.60
1956	1433, 1503	4,400	July 21, 1956	33	260	.385	5.24	342	6.89
1957	1503	7,930	Apr. 6, 1957	25	515	.763	10.36	508	10.22
1958	1553	7,670	Mar. 31, 1958	89	730	1.08	14.71	666	13.41
1959	1623	9,900	June 3, 1959	67	438	.649	8.78	601	12.07
1960	1703	15,700	Oct. 1, 1959	115	838	1.24	16.89	-	-

345. Willis River at Flanagan Mills, Va.

Location (revised).--Lat 37°40'00", long 78°10'00", on left bank 15 ft upstream from highway bridge 0.4 mile east of Flanagan Mills, Cumberland County, 7.7 miles downstream from Reynolds Creek, and 6.9 miles upstream from mouth.

Drainage area.--247 sq mi.

Records available.--April 1926 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 178.98 ft above mean sea level (levels by Corps of Engineers). Prior to Jan. 3, 1935, chain gage at site a quarter of a mile upstream at same datum.

Average discharge.--34 years (1926-60), 244 cfs.

Extremes.--1926-60: Maximum discharge, 9,580 cfs Apr. 27, 1937 (gage height, 23.86 ft, from floodmarks), from rating curve extended above 5,800 cfs on basis of velocity-area studies, with backwater correction; minimum, 2 cfs Sept. 30, Oct. 1, 4, 12, 1930.

Remarks.--Complete regulation of flow from Trices Lake, tributary to Willis River, slightly affects flow at gage.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	140	115	312	175	344	374	396	150	151	68.2	55.3	63.3	194
1952	46.6	227	502	567	405	584	352	200	80.7	70.7	153	132	277
1953	52.3	337	208	438	320	580	360	187	114	70.8	33.0	28.7	227
1954	47.5	58.2	177	415	202	319	277	446	67.8	34.1	27.4	17.8	175
1955	64.8	93.4	273	102	246	432	215	115	66.0	78.9	615	107	201
1956	61.5	73.1	66.8	75.6	275	252	272	124	65.2	32.9	28.0	32.4	112
1957	52.7	190	210	189	511	345	370	84.1	99.5	29.9	18.4	42.8	176
1958	42.0	189	377	421	405	514	530	446	177	61.1	72.3	30.0	271
1959	47.3	57.8	218	227	130	177	402	82.8	82.7	82.9	67.9	55.4	136
1960	86.8	162	198	213	672	463	539	284	110	49.2	98.4	219	256

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.65	0.52	1.45	0.82	1.45	1.74	1.78	0.70	0.68	0.32	0.28	0.29	10.66
1952	.22	1.03	2.34	2.65	1.77	2.72	1.60	.93	.36	.33	.71	.60	15.28
1953	.24	1.52	.97	2.04	1.35	2.71	1.63	.87	.52	.33	.15	.13	12.46
1954	.22	.26	.83	1.94	.85	1.49	1.25	2.09	.31	.16	.13	.08	9.61
1955	.30	.42	1.28	1.48	1.04	2.02	.97	.54	.30	.37	2.87	.48	11.07
1956	.29	.33	.31	.35	1.20	1.18	1.23	.58	.29	.15	.13	.15	6.19
1957	.25	.86	.98	.88	2.16	1.61	1.67	.39	.45	.14	.09	.19	9.67
1958	.20	.85	1.76	1.96	1.71	2.40	2.40	2.09	.80	.28	.34	.14	14.93
1959	.22	.26	1.02	1.06	.55	.83	1.82	.39	.37	.59	.32	.25	14.09
1960	.42	.73	.92	.99	2.93	2.16	2.43	1.33	.50	.23	.46	.99	14.09

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	231	12.71	-
1951	1203	1,040	Mar. 20, 1951	32	194	0.785	10.66	212	11.63	-
1952	1233	3,550	Dec. 23, 1951	30	277	1.12	15.28	261	14.40	-
1953	1273	2,380	Nov. 20, 1952	16	227	.919	12.46	201	11.04	-
1954	1333	2,320	May 22, 1954	10	175	.709	9.61	187	10.30	-
1955	1383	8,100	Aug. 19, 1955	11	201	.814	11.07	182	10.00	-
1956	1433	920	Feb. 7, 1956	14	112	.453	6.19	133	7.35	-
1957	1503	1,320	Apr. 11, 1957	8.7	176	.713	9.67	189	10.39	-
1958	(a)	1,810	May 8, 1958	17	271	1.10	14.93	248	13.62	-
1959	(a)	2,200	Dec. 31, 1958	13	136	.561	7.48	146	8.05	-
1960	(a)	2,960	Apr. 7, 1960	28	256	1.04	14.09	-	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

350. James River at Cartersville, Va.

Location.--Lat 37°40', long 78°05', on left bank 200 ft downstream from highway bridge between Pemberton and Cartersville, Cumberland County, 2 miles downstream from Willis River, and at mile 152.4.

Drainage area.--6,242 sq mi.

Records available.--October 1898 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 161.57 ft above mean sea level (levels by Corps of Engineers). Prior to June 4, 1927, wire-weight or chain gage at same site and datum.

Average discharge.--62 years (1898-60), 7,097 cfs.

Extremes.--1898-1960: Maximum discharge, 180,000 cfs Sept. 20, 1944 (gage height, 29.6 ft, from floodmark in gage well); minimum, 320 cfs Sept. 22, 1932; minimum daily, 348 cfs Oct. 5, 1930; minimum gage height, 0.10 ft Oct. 2, 1941.

Remarks.--Large diurnal fluctuation caused by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,160	3,153	14,184	4,842	13,397	11,434	18,599	6,049	11,698	3,546	2,101	1,493	7,749
1952	1,314	3,365	9,315	14,560	13,790	18,420	12,520	10,610	3,652	3,040	4,650	4,717	8,325
1953	2,040	6,252	6,409	11,280	12,790	18,770	10,140	7,294	3,630	2,071	1,349	976	6,886
1954	1,027	1,304	3,973	5,320	4,733	12,340	6,805	6,008	2,857	2,309	1,174	758	4,057
1955	4,597	5,876	8,755	7,370	10,400	21,830	9,459	4,041	3,677	2,036	11,720	2,330	7,677
1956	1,495	1,590	1,456	1,353	7,098	7,459	7,813	2,808	2,025	1,747	1,108	1,565	3,103
1957	2,635	5,468	4,747	5,871	15,570	10,710	15,070	5,385	4,255	1,681	911	3,503	6,255
1958	2,782	5,072	9,259	10,660	9,930	13,940	19,280	14,560	3,941	3,278	3,958	1,695	8,182
1959	1,541	1,624	3,304	5,159	3,617	6,471	12,920	4,426	6,900	2,249	2,314	2,202	4,351
1960	9,629	5,218	8,203	7,275	15,700	12,330	18,920	11,260	5,589	2,073	1,969	3,133	8,405

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.58	0.56	2.62	0.89	2.24	2.11	3.32	1.12	2.09	0.65	0.39	0.27	16.84
1952	.24	.60	1.72	2.69	2.38	3.40	2.24	1.96	.65	.56	.86	.84	18.14
1953	.58	1.12	1.19	2.09	2.14	3.47	1.81	1.35	.65	.58	.25	.17	15.00
1954	.19	.23	.73	.98	.79	2.28	1.22	1.11	.51	.43	.22	.14	8.85
1955	.85	1.05	1.61	1.36	1.74	4.04	1.70	.75	.66	.58	2.17	.42	16.73
1956	.28	.28	.27	.25	1.23	1.37	1.40	.52	.56	.32	.21	.28	6.77
1957	.53	.98	.88	1.08	2.59	1.98	2.69	.99	.76	.31	.17	.63	13.60
1958	.51	.91	1.71	1.97	1.66	2.57	3.45	2.69	.70	.61	.71	.30	17.79
1959	.28	.29	.61	.95	.60	1.20	2.31	.82	1.16	.42	.43	.39	9.46
1960	1.78	.93	1.52	1.34	2.71	2.28	3.38	2.08	1.00	.58	.56	.56	18.32

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	7,311	15.89
1951	1203	66,900	Dec. 9, 1950	1,200	7,749	1.24	16.84	7,196	15.64
1952	1233	60,300	Dec. 22, 1951	1,030	8,325	1.33	18.14	8,377	18.27
1953	1273	75,600	Mar. 26, 1953	760	6,886	1.10	15.00	6,187	13.46
1954	1333	85,600	Mar. 3, 1954	537	4,057	1.050	8.83	5,142	11.19
1955	1383	104,000	Aug. 19, 1955	564	7,677	1.23	16.73	6,442	14.05
1956	1433	25,800	Mar. 16, 1956	591	3,103	.497	6.77	3,818	8.33
1957	1503	67,400	Apr. 7, 1957	600	6,255	1.00	13.60	6,596	14.33
1958	1553	51,700	Apr. 1, 1958	1,200	8,182	1.31	17.79	7,287	15.84
1959	1623	42,300	June 3, 1959	860	4,351	.697	9.46	5,750	12.51
1960	1703	70,800	Apr. 6, 1960	1,280	8,405	1.35	18.32	-	-

365. Fine Creek at Fine Creek Mills, Va.

Location.--Lat 37°35'52", long 77°49'12", on right bank 75 ft downstream from highway bridge at Fine Creek Mills, Powhatan County, 0.8 mile upstream from mouth, and 6.7 miles northeast of Powhatan.

Drainage area.--23 sq mi, approximately.

Records available.--July 1944 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 160 ft (from topographic map). Prior to Oct. 28, 1953, chain gage or inclined staff gage and crest-stage gage 75 ft upstream at same datum.

Average discharge.--16 years (1944-60), 19.3 cfs.

Extremes.--1944-60: Maximum discharge, 2,010 cfs Aug. 18, 1955 (gage height, 6.98 ft); minimum, 0.4 cfs Sept. 11, 1954 (gage height, 1.56 ft).

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	17.1	12.5	23.9	18.5	33.4	31.0	25.0	13.3	14.7	10.1	12.0	7.58	18.2
1952	6.30	23.9	51.1	42.4	27.8	51.1	48.1	22.6	8.92	6.65	10.5	10.0	25.8
1953	5.95	27.9	20.0	31.3	26.4	40.2	29.6	18.8	7.77	2.67	1.73	1.75	17.8
1954	3.30	4.12	9.77	24.3	14.2	20.4	22.4	27.2	11.7	2.98	1.91	.803	11.9
1955	2.60	6.23	11.5	6.38	16.1	23.4	17.8	9.03	4.87	8.58	83.3	9.88	16.7
1956	16.8	11.0	9.37	8.89	26.6	19.5	21.1	9.54	9.36	5.11	4.83	4.09	12.1
1957	7.69	16.5	15.4	16.5	39.2	29.2	26.7	8.65	8.61	2.01	3.09	5.45	14.7
1958	15.8	18.6	42.5	32.9	39.0	45.5	46.9	39.1	11.1	4.86	13.4	2.56	26.0
1959	6.10	9.38	37.9	15.9	14.5	13.9	35.3	10.7	8.85	8.27	9.63	3.89	14.5
1960	8.43	14.7	17.4	18.9	42.7	35.5	38.9	24.2	6.36	3.87	9.97	16.6	19.7

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.86	0.61	1.20	0.93	1.51	1.56	1.22	0.67	0.71	0.51	0.60	0.37	10.75
1952	.32	1.16	2.56	2.12	1.30	2.56	2.33	1.13	.43	.33	.53	.49	15.26
1953	.30	1.35	1.00	1.57	1.20	2.02	1.44	.94	.38	.13	.09	.08	10.50
1954	.16	.20	.49	1.22	.64	1.02	1.09	1.36	.57	.15	.10	.04	7.04
1955	.13	.30	.58	.32	.73	1.18	.86	.45	.24	.42	4.17	.48	9.86
1956	.84	.53	.47	.45	1.25	.98	1.02	.48	.45	.26	.24	.20	7.17
1957	.39	.80	.77	.83	1.77	1.46	1.29	.43	.42	.10	.15	.26	8.67
1958	.79	.90	2.13	1.65	1.77	2.28	2.28	1.96	.54	.24	.67	.12	15.33
1959	.31	.46	1.90	.80	.66	.70	1.71	.54	.43	.42	.48	.19	8.60
1960	.42	.71	.87	.95	2.01	1.78	1.89	1.21	.31	.19	.50	.81	11.65

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	22.4	13.24
1951	1203	-	Feb. 17, 1951	4.0	18.2	0.791	10.75	20.5	12.12
1952	1233	1,410	Dec. 21, 1951	3.2	25.8	1.12	15.26	23.5	13.87
1953	1273	253	Jan. 25, 1953	.8	17.8	.774	10.50	14.7	8.70
1954	1333, 1383	266	June 15, 1954	.6	11.9	.517	7.04	12.2	7.23
1955	1383	2,010	Aug. 18, 1955	.50	16.7	.726	9.86	18.1	10.69
1956	1433	138	Oct. 15, 1955	1.2	12.1	.526	7.17	12.3	7.29
1957	1503	150	Apr. 9, 1957	1.0	14.7	.639	8.67	17.9	10.53
1958	(a)	302	May 7, 1958	1.4	26.0	1.13	15.33	24.0	14.18
1959	(a)	1,000	Dec. 29, 1958	2.0	14.5	.630	8.60	13.4	7.93
1960	(a)	381	Apr. 5, 1960	1.4	19.7	.857	11.65	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

370. James River & Kanawha Canal near Richmond, Va.

Location.--Lat 37°33'52", long 77°34'28", on left bank 75 ft downstream from canal bridge, 400 ft downstream from headgates, 1,200 ft north of north end of Boshier Dam on James River, 1.6 miles (revised) upstream from Huguenot Memorial Bridge, and 2.0 miles (revised) west of city limits of Richmond, Henrico County.

Records available.--September 1936 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 106.07 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1938, at datum 3.06 ft higher.

Average discharge.--24 years (1936-60), 875 cfs.

Extremes.--1936-60: Maximum gage height, 19.7 ft Sept. 20, 1944 (discharge not determined, flow of canal merges with James River); no flow at times when headgates were closed.

Remarks.--Canal diverts from James River 1,200 ft above Boshier Dam and discharges into river at several points below gaging station near Richmond. Figures given show flow in canal only.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	955	940	1,023	951	1,082	1,094	1,108	1,028	1,061	939	903	846	994
1952	777	909	985	1,055	1,049	1,042	1,069	1,086	932	875	885	931	966
1953	753	698	993	1,041	1,061	1,083	1,028	989	909	866	830	800	920
1954	789	826	925	945	927	1,059	1,006	970	898	758	738	658	875
1955	718	927	1,035	913	1,039	978	1,016	971	931	842	956	757	923
1956	705	758	753	764	922	920	929	795	803	753	755	742	799
1957	825	873	882	844	912	963	977	890	871	773	718	808	861
1958	804	862	901	938	937	985	998	961	861	795	772	700	877
1959	787	770	799	878	860	898	847	844	790	753	764	755	812
1960	851	854	882	839	897	903	879	894	822	795	770	830	851

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	981	-
1951	1203	1,360	Dec. 4, 1950	375	994	-	-	973	-
1952	1233	1,390	Sept. 2, 1952	219	966	-	-	947	-
1953	1273	1,230	Feb. 22, 1953	0	920	-	-	928	-
1954	1333	1,390	Mar. 2, 1954	0	875	-	-	886	-
1955	1383	2,340	Aug. 20, 1955	0	923	-	-	884	-
1956	1433	1,120	Apr. 17, 1956	0	799	-	-	830	-
1957	1503	1,100	Apr. 6, 1957	0	861	-	-	860	-
1958	(a)	1,220	Apr. 24, 1958	35	877	-	-	859	-
1959	(a)	1,060	Apr. 26, 1959	47	812	-	-	831	-
1960	(a)	1,180	Oct. 1, 1959	59	851	-	-	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

375. James River near Richmond, Va.

Location.--Lat 37°33'47", long 77°32'50", on left bank 0.1 mile upstream from Huguenot Memorial Bridge, 1.7 miles downstream from Bosher Dam, 0.5 mile (revised) west of city limits of Richmond, Henrico County, 3.3 miles upstream from Powhite Creek, and at mile 111.7.

Drainage area.--6,757 sq mi.

Records available.--October 1934 to September 1960. Gage-height records collected in vicinity of Mayo's Bridge, at mile 104.6, 1876-1956, and at mile 103.7, since 1957, are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Control is Williams Island Dams which divert flow for city of Richmond water supply. Datum of gage is 98.82 ft above mean sea level, datum of 1929.

Average discharge.--26 years (1934-60), 7,532 cfs (includes flow in James River & Kanawha Canal).

Extremes.--1934-60: Maximum discharge, 175,000 cfs Mar. 19, 1936 (gage height, 23.42 ft); minimum daily, 46 cfs on many days in 1941, 1944, 1953-54, 1956-57. Probable combined daily minimum discharge of James River and James River & Kanawha Canal near Richmond since 1899, about 350 cfs in October 1930.

Remarks.--City of Richmond diverts average of 46 cfs from gage pool. Flow regulated by powerplants above station. James River & Kanawha Canal diverts around station. Records above 120,000 cfs include the flow of the canal. Records of chemical analyses for the periods October 1947 to September 1951, October 1952 to September 1956, and water temperatures, are published in reports of the Geological Survey.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,757	2,633	13,684	4,741	13,169	11,506	17,838	5,830	11,213	3,253	1,551	897	7,368
1952	577	2,921	9,135	14,270	13,580	18,140	12,180	10,490	3,017	2,376	3,981	4,125	7,894
1953	1,374	6,133	5,833	11,200	12,480	18,480	10,170	7,122	3,154	1,401	610	233	6,484
1954	274	688	3,359	5,048	4,355	11,780	6,433	5,872	2,288	1,536	431	144	3,523
1955	4,021	4,856	7,263	6,316	9,269	21,050	8,750	2,994	2,966	1,654	12,080	2,036	7,029
1956	1,282	1,169	928	892	6,784	6,934	7,456	2,427	1,597	1,359	562	905	2,668
1957	2,292	5,083	4,194	5,016	15,400	10,700	14,440	4,861	3,657	1,029	310	2,758	5,725
1958	2,308	4,480	9,362	10,420	11,140	13,380	18,860	14,210	3,583	2,737	3,544	1,219	7,919
1959	1,013	1,047	2,886	4,879	3,243	5,689	12,793	3,902	6,063	1,653	1,959	1,589	3,882
1960	8,700	4,831	7,712	6,907	15,549	11,403	19,394	10,603	5,478	1,568	1,790	3,047	8,040

Monthly and yearly runoff, in inches (adjusted) a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.63	0.59	2.51	0.97	2.20	2.14	3.12	1.16	2.03	0.71	0.42	0.29	16.77
1952	.23	.63	1.73	2.62	2.54	3.27	2.19	1.97	.65	.55	.83	.83	17.84
1953	.36	1.13	1.16	2.09	2.08	3.33	1.85	1.38	.67	.39	.25	.17	14.86
1954	.18	.25	.73	1.02	.81	2.19	1.23	1.16	.53	.39	.20	.13	8.82
1955	.81	.96	1.42	1.23	1.59	3.76	1.62	.68	.64	.43	2.40	.46	16.00
1956	.34	.32	.29	.28	1.23	1.34	1.38	.55	.40	.36	.22	.27	6.98
1957	.53	.98	.87	1.00	2.51	1.99	2.54	.98	.75	.31	.18	.59	13.23
1958	.53	.98	1.75	1.94	1.86	2.46	3.28	2.59	.75	.60	.74	.32	17.68
1959	.31	.50	.63	.98	.63	1.12	2.25	.81	1.13	.41	.47	.39	9.43
1960	1.63	.94	1.46	1.33	2.62	2.10	3.35	1.96	1.04	.40	.44	.64	17.91

† Corrected.

a Adjusted for diversion by James River & Kanawha Canal.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year			
		Observed				Adjusted a/			Observed		Adjusted a/	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	
		Discharge	Date									
1950	-	-	-	-	-	-	-	-	6,759	7,740	15.55	
1951	1203	61,100	Dec. 10, 1950	460	7,368	8,362	1.24	16.77	6,820	7,793	15.63	
1952	1233	58,700	Dec. 22, 1951	202	7,894	8,860	1.31	17.84	7,945	8,892	17.90	
1953	1273	71,100	Mar. 27, 1953	46	6,484	7,404	1.10	14.86	5,733	6,661	13.37	
1954	1333	58,700	Mar. 3, 1954	46	3,523	4,398	.651	8.82	4,515	5,401	10.85	
1955	1383	98,700	Aug. 20, 1955	46	7,029	7,952	1.18	16.00	5,955	6,839	13.76	
1956	1433	22,600	Mar. 17, 1956	46	2,668	3,467	.513	6.98	3,351	4,181	8.41	
1957	1503	62,700	Apr. 8, 1957	46	5,725	6,586	.975	13.23	6,116	6,976	14.01	
1958	(b)	50,100	Apr. 2, 1958	590	7,919	8,796	1.30	17.68	6,977	7,836	15.76	
1959	(b)	39,800	June 4, 1959	354	3,882	4,694	.695	9.43	5,256	6,087	12.22	
1960	(b)	68,600	Apr. 7, 1960	690	8,040	8,891	1.32	17.91	-	-	-	

a Adjusted for diversion by James River & Kanawha Canal.

b Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

380. Falling Creek near Chesterfield, Va.

Location.--Lat 37°26'37", long 77°31'21", on left bank at upstream side of bridge on State Highway 651, 0.8 mile downstream from Licking Creek, 2.8 miles upstream from Pocoshock Creek, and 4.7 miles northwest of Chesterfield, Chesterfield County.

Drainage area.--32.8 sq mi.

Records available.--October 1955 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 130 ft (from topographic map).

Average discharge.--5 years (1955-60), 39.1 cfs (revised).

Extremes.--1955-60: Maximum discharge, 2,510 cfs (revised) Sept. 12, 1960 (gage height, 12.67 ft), from rating curve extended above 1,400 cfs by logarithmic plotting; minimum, 1.3 cfs Aug. 11-15, 1957; minimum gage height, 1.80 ft Aug. 14, 15, 1957.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1956	48.3	22.8	17.4	21.9	64.9	50.4	46.8	18.9	22.5	13.6	5.66	16.9	29.0
1957	38.4	50.1	45.8	36.8	115	79.9	52.4	13.0	14.9	3.10	4.71	6.02	37.8
1958	20.6	40.2	113	67.5	91.9	83.2	88.2	65.2	32.4	10.2	*37.4	5.20	*54.4
1959	8.63	11.2	*56.5	36.9	33.0	27.0	84.2	15.5	7.07	13.0	*30.6	4.75	*27.3
1960	9.36	69.6	41.5	36.5	83.0	71.3	76.3	29.8	5.80	7.10	38.6	*102	*47.2

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1956	1.70	0.78	0.61	0.77	2.14	1.78	1.60	0.66	0.77	0.48	0.20	0.57	12.06
1957	1.35	1.71	1.61	1.29	3.66	2.81	1.78	.46	.51	.11	.17	.21	15.67
1958	.72	1.37	3.98	2.38	2.92	2.93	3.00	2.29	1.10	.36	*1.31	.18	*22.54
1959	.31	.38	*1.99	1.30	1.05	.95	2.87	.54	.24	.48	*1.08	.16	*11.33
1960	.33	2.37	1.46	1.28	2.73	2.51	2.59	1.05	.20	.25	1.36	*3.47	*19.60

* Revised.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1956	1433	356	June 2, 1956	2.2	29.0	0.884	12.06	32.8	13.64
1957	1503	*592	Feb. 26, 1957	1.3	37.8	1.15	15.67	41.2	17.07
1958	1553	*1,040	Aug. 4, 1958	3.7	*54.4	1.66	*22.54	*46.2	*19.15
1959	1623	*970	Dec. 29, 1958	1.5	*27.3	*.832	*11.33	*30.9	*12.81
1960	1703	*2,510	Sept. 12, 1960	2.0	*47.2	*1.44	*19.60	-	-

*Revised.

385. Falling Creek near Drewrys Bluff, Va.

Location.--Lat 37°27'40", long 77°28'00", on left bank 300 ft downstream from highway bridge, 600 ft downstream from Chesterfield County Reservoir, 2.4 miles northeast of town of Drewrys Bluff, Chesterfield County, 2.7 miles downstream from Pocoshock Creek, and 3.7 miles upstream from mouth.

Drainage area.--54 sq mi, approximately.

Records available.--September 1942 to September 1956, July 1957 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 60 ft (from topographic map). Prior to Oct. 1, 1952, water-stage recorder at site 300 ft upstream at datum 5.39 ft higher.

Average discharge.--17 years, 55.5 cfs (unadjusted).

Extremes.--1942-56, 1957-60: Maximum discharge, 7,270 cfs July 18, 1945 (gage height, 10.1 ft, site and datum then in use); minimum, 0.12 cfs Aug. 13, 1953, Sept. 6, 7, 1954; minimum gage height, 1.54 ft Sept. 7, 1954.

Remarks.--Since 1953, Chesterfield County diverts up to 1.5 cfs for water supply from reservoir 600 ft upstream from gage. Some regulation by water-supply reservoir.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	18.3	17.5	46.4	29.4	44.5	66.5	54.5	24.1	27.7	8.36	5.83	2.86	28.7
1952	3.89	18.9	47.9	109	83.9	162	128	56.7	17.5	9.73	38.8	22.7	58.2
1953	9.16	72.2	45.1	117	98.3	116	99.3	33.2	14.4	2.88	.793	7.92	51.0
1954	4.81	9.55	29.7	70.8	43.8	55.5	83.2	86.9	10.7	.844	2.46	2.260	33.2
1955	4.40	6.42	17.9	13.5	37.5	66.6	48.5	15.7	8.26	21.1	252	60.9	46.3
1956	85.5	39.6	30.7	38.0	101	78.9	72.2	35.1	40.3	24.5	11.8	24.8	48.3
1957	-	-	-	-	-	-	-	-	-	-	7.34	10.6	-
1958	31.2	55.0	190	108	141	138	142	110	53.2	16.4	76.4	7.20	88.7
1959	15.9	15.5	84.4	52.0	47.0	32.5	122	19.3	9.92	26.3	51.2	6.98	40.1
1960	16.0	137	62.2	52.5	142	114	134	43.4	6.34	9.85	62.2	176	79.1

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.39	0.36	0.99	0.63	0.86	1.42	1.13	0.51	0.57	0.18	0.12	0.06	7.22
1952	.08	.39	1.02	2.33	1.67	3.46	2.64	1.21	.36	.19	.83	.47	14.65
1953	.20	1.50	.96	2.50	1.90	2.48	2.05	.71	.30	.06	.02	.16	12.84

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	42.9	10.79
1951	1205	249	Mar. 20, 1951	0.9	28.7	0.531	7.22	27.8	6.97
1952	1233	1,040	Mar. 25, 1952	.9	58.2	1.08	14.65	62.8	15.82
1953	1273	1,020	Nov. 21, 1952	.13	51.0	.944	12.84	44.2	-
1954	1333	932	May 21, 1954	.12	33.2	-	-	31.9	-
1955	1363, 1553	4,700	Aug. 18, 1955	.31	46.3	-	-	57.0	-
1956	1433	700	Oct. 1, 1955	2.4	48.3	-	-	-	-
1957	1553	a172	Aug. 19, 1957	-	-	-	-	-	-
1958	1553, 1623	2,140	Aug. 4, 1958	.8	88.7	-	-	75.2	-
1959	1623	1,530	Dec. 29, 1958	.6	40.1	-	-	48.3	-
1960	1703	5,010	Sept. 12, 1960	.6	79.1	-	-	-	-

a Maximum during period July to September.

390. Buffalo Creek near Hampden Sydney, Va.

Location (revised).--Lat 37°15'25", long 78°29'10", on left bank at bridge on State Highway 626, 0.8 mile upstream from Locket Creek, 2 miles northwest of Hampden Sydney, Prince Edward County, and 6 miles southwest of Farmville.

Drainage area.--70 sq mi, approximately.

Records available.--August 1946 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 340 ft (by barometer). Prior to Aug. 19, 1953, staff gage at same site and datum.

Average discharge.--14 years (1946-60), 64.8 cfs.

Extremes.--1946-60: Maximum discharge 6,440 cfs Aug. 18, 1955 (gage height, 9.00 ft), from rating curve extended above 1,600 cfs by logarithmic plotting; minimum, 5.1 cfs Sept. 18, 1954 (gage height, 1.38 ft).

Flood in August 1940 reached a stage of about 15 ft, from information by local resident.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	49.6	52.3	106	62.5	79.2	85.3	90.6	51.1	42.5	37.3	32.4	25.4	59.3
1952	23.9	82.6	156	112	94.2	138	107	61.2	36.7	51.8	50.9	65.8	81.6
1953	30.6	198	73.9	107	104	136	83.8	51.0	37.2	23.4	18.9	21.3	73.5
1954	25.7	28.1	53.7	126	54.2	92.7	57.5	61.6	43.1	18.8	11.8	8.60	48.6
1955	29.2	38.0	79.9	34.4	72.8	96.8	85.9	45.0	27.8	43.0	260	60.7	73.0
1956	44.1	37.5	32.8	31.7	88.2	74.7	84.5	42.2	29.2	27.7	16.2	15.6	42.4
1957	27.0	44.5	46.3	46.4	110	74.3	85.6	27.4	68.4	14.5	21.0	47.4	50.4
1958	27.6	96.0	94.7	108	140	110	122	114	49.6	31.9	52.3	24.6	80.4
1959	39.5	36.4	108	57.4	48.3	46.0	66.5	32.3	24.6	18.1	16.0	17.0	44.2
1960	36.0	41.7	54.1	50.9	159	97.3	142	84.0	37.8	22.5	26.0	31.0	64.7

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.82	0.83	1.74	1.03	1.18	1.37	1.44	0.84	0.68	0.61	0.53	0.40	11.47
1952	.39	1.32	2.57	1.84	1.46	2.27	1.71	1.01	.58	.85	.84	1.05	15.89
1953	.50	3.16	1.22	1.76	1.55	2.24	1.34	.84	.59	.39	.31	.34	14.24
1954	.42	.45	.88	2.08	.81	1.52	.92	1.01	.69	.31	.19	.14	9.42
1955	.48	.61	1.31	.57	1.08	1.59	1.37	.74	.44	.71	4.28	.97	14.15
1956	.73	.60	.54	.52	1.36	1.23	1.35	.70	.47	.46	.27	.25	8.48
1957	.44	.71	.76	.76	1.64	1.22	1.36	.45	1.09	.24	.35	.76	9.78
1958	.45	1.53	1.56	1.78	2.08	1.81	1.94	1.88	.79	.53	.86	.39	15.60
1959	.65	.58	1.78	.95	.72	1.76	1.38	.53	.39	.50	.26	.27	8.57
1960	.59	.66	.89	.84	2.45	1.60	2.26	1.38	.60	.37	.43	.49	12.56

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	76.8	14.87
1951	1203	452	Dec. 5, 1950	15	59.3	0.847	11.47	63.8	12.36
1952	1233	3,540	Dec. 21, 1951	15	81.6	1.17	15.89	84.8	16.49
1953	1273	4,040	Nov. 21, 1952	11	73.5	1.05	14.24	57.3	11.11
1954	1333	1,580	Jan. 23, 1954	5.5	48.6	.694	9.42	52.0	10.07
1955	1383	6,440	Aug. 18, 1955	7.5	73.0	1.04	14.15	70.3	13.62
1956	1433	643	Feb. 7, 1956	8.6	42.4	.606	8.48	43.8	8.52
1957	1503	1,020	Apr. 9, 1957	5.5	50.4	.720	9.78	58.8	11.41
1958	(a)	1,280	Feb. 27, 1958	21	80.4	1.15	15.60	77.7	15.07
1959	(a)	2,440	Dec. 29, 1958	6.8	44.2	.631	8.57	39.7	7.70
1960	(a)	2,120	Apr. 5, 1960	17	64.7	.924	12.56	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

395. Appomattox River at Farmville, Va.

Location.--Lat 37°18'25", long 78°23'20", on left bank 15 ft downstream from bridge on State Highway 45, 1,000 ft north of town limits of Farmville, Prince Edward County, and 1½ miles downstream from Buffalo Creek.

Drainage area.--306 sq mi.

Records available.--March 1926 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 281.93 ft above mean sea level, datum of 1929. Prior to Nov. 29, 1928, chain gage at same site and datum.

Average discharge.--34 years (1926-60), 285 cfs.

Extremes.--1926-60: Maximum discharge, 21,000 cfs Aug. 15, 1940 (gage height, 23.60 ft), from rating curve extended above 12,000 cfs by logarithmic plotting; minimum, 3.8 cfs Sept. 25, 1941; minimum daily, 9 cfs Sept. 20, 1932.

Remarks.--Diurnal fluctuation at low flow caused by Prince Edward Mills 0.2 mile above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	176	164	382	254	370	375	415	183	148	148	123	102	236
1952	78.7	266	793	679	444	688	412	212	110	128	193	288	358
1953	104	426	248	423	370	549	366	226	131	92.5	62.4	85.8	256
1954	88.9	90.8	221	505	217	367	270	255	162	68.0	58.8	45.2	196
1955	110	134	296	126	333	480	315	190	111	134	802	162	266
1956	124	121	105	102	317	292	309	143	112	97.6	57.5	83.3	154
1957	93.0	202	203	183	497	321	406	112	169	52.6	57.9	144	201
1958	76.8	336	386	477	496	478	625	513	235	116	169	90.5	331
1959	110	114	309	235	186	201	370	131	87.1	109	8	65.6	165
1960	171	174	216	213	719	437	520	399	156	90.3	139	192	283

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.66	0.60	1.44	0.96	1.26	1.42	1.52	0.69	0.54	0.56	0.46	0.37	10.48
1952	.30	.97	2.99	2.56	1.56	2.59	1.51	.80	.40	.48	.73	1.05	15.94
1953	.39	1.55	.93	1.59	1.26	2.06	1.34	.85	.48	.35	.24	.31	11.35
1954	.34	.33	.83	1.90	.74	1.38	.98	.96	.59	.26	.22	.17	8.70
1955	.41	.49	1.11	.48	1.14	1.81	1.15	.72	.40	.50	3.02	.59	11.82
1956	.47	.44	.40	.38	1.12	1.10	1.13	.54	.41	.37	.22	.30	6.88
1957	.35	.74	.76	.69	1.69	1.21	1.48	.42	.62	.20	.22	.53	8.91
1958	.29	1.23	1.45	1.80	1.69	1.80	2.28	1.94	.86	.44	.60	.33	14.71
1959	.42	.41	1.17	.88	.63	.76	1.35	.49	.32	.41	.26	.24	7.34
1960	.65	.64	.81	.80	2.53	1.65	1.90	1.50	.57	.34	.52	.70	12.61

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	290	12.85
1951	1203	1,790	Dec. 5, 1950	64	236	0.771	10.48	271	12.04
1952	1233	7,400	Dec. 23, 1951	61	358	1.17	15.94	327	14.55
1953	1273	5,020	Nov. 21, 1952	35	256	.837	11.35	225	9.98
1954	1333	3,060	Jan. 23, 1954	20	196	.641	8.70	208	9.21
1955	1383	11,000	Aug. 19, 1955	30	266	.869	11.82	250	11.12
1956	1433	1,400	Feb. 7, 1956	33	154	.503	6.88	167	7.42
1957	1503	2,100	Apr. 6, 10, 1957	22	201	.657	8.91	226	10.05
1958	1553	2,960	Feb. 28, 1958	64	331	1.08	14.71	309	13.74
1959	1623	3,830	Dec. 30, 1958	35	165	.539	7.34	168	7.44
1960	1703	4,060	Feb. 20, 1960	54	283	.925	12.61	-	-

400. Appomattox River at Mattoax, Va.

Location.--Lat 37°25'17", long 77°51'33", on right bank 75 ft upstream from Southern Railway bridge at Mattoax, Amelia County, 0.3 mile upstream from Skinquarter Creek, and 3.7 miles upstream from Flat Creek.

Drainage area.--729 sq mi.

Records available.--August 1900 to December 1905, March 1926 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 174.51 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. August 1900 to December 1905, chain gage at same site at different datum. March 1926 to October 1936, chain gage at same site and datum.

Average discharge.--39 years (1900-1905, 1926-60), 711 cfs.

Extremes.--1900-1905, 1926-60: Maximum discharge, 35,000 cfs Aug. 18, 1940 (gage height, 35.3 ft, from floodmark in gage house), from rating curve extended above 20,000 cfs on basis of records for stations at Farmville and near Petersburg; minimum, 11 cfs Oct. 2, 1930 (gage height, 3.52 ft).

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	416	360	825	617	935	972	972	393	384	344	268	258	560
1952	156	702	1,413	1,299	1,146	1,743	1,126	676	254	241	326	488	797
1953	188	1,088	643	1,230	1,059	1,519	951	574	389	217	111	140	676
1954	138	189	475	1,233	565	879	739	938	319	107	121	66.3	482
1955	214	245	654	298	757	1,250	794	430	231	229	2,487	339	663
1956	606	372	274	284	979	774	903	346	299	213	206	141	546
1957	227	567	519	443	1,544	1,003	943	226	419	83.8	139	416	437
1958	205	859	1,332	1,336	1,208	1,483	1,623	1,486	535	219	560	191	919
1959	251	245	611	1,008	498	472	1,161	329	212	222	150	121	441
1960	314	427	549	562	1,698	1,212	1,528	977	331	165	231	542	722

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.66	0.55	1.30	0.98	1.33	1.53	1.48	0.62	0.59	0.54	0.42	0.40	10.40
1952	.25	1.07	2.24	2.05	1.69	2.76	1.72	1.07	.39	.38	.52	.75	14.89
1953	.30	1.66	1.02	1.95	1.51	2.40	1.52	.91	.60	.34	.18	.21	12.60
1954	.22	.29	.75	1.95	.81	1.40	1.13	1.49	.49	.17	.19	.10	8.99
1955	.34	.37	1.03	.47	1.08	1.97	1.22	.68	.35	.36	3.93	.52	12.32
1956	.96	.57	.43	.45	1.44	1.22	1.38	.55	.46	.34	.33	.22	8.35
1957	.36	.87	.82	.70	2.21	1.59	1.44	.36	.64	.13	.22	.64	9.98
1958	.32	1.32	2.11	2.11	1.73	2.34	2.49	2.35	.82	.35	.89	.29	17.12
1959	.40	.37	.97	1.59	.71	.75	1.81	.52	.32	.35	.24	.19	8.22
1960	.50	.65	.87	.89	2.80	1.91	2.34	1.54	.51	.26	.37	.83	13.47

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	682	12.69
1951	1203	2,590	Mar. 22, 1951	144	560	0.768	10.40	616	11.45
1952	1233	7,540	Dec. 24, 1951	121	797	1.09	14.89	766	14.31
1953	1273	5,800	Nov. 24, 1952	52	676	.927	12.60	584	10.88
1954	1333	4,200	May 21, 1954	36	482	.661	8.99	508	9.47
1955	1383	12,100	Aug. 21, 1955	47	663	.909	12.32	674	12.54
1956	1433	3,080	Oct. 14, 1955	62	447	.613	8.35	452	8.44
1957	1503	3,190	Mar. 1, 1957	30	536	.735	9.98	627	11.68
1958	(a)	4,750	May 10, 1958	144	919	1.26	17.12	811	15.11
1959	(a)	6,460	Jan. 2, 1959	67	441	.605	8.22	456	8.50
1960	(a)	6,340	Apr. 9, 1960	105	722	.990	13.47	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

410. Deep Creek near Mannboro, Va.

Location.--Lat 37°16'59", long 77°52'22", on left bank 300 ft upstream from new bridge on State Highway 38, 0.9 mile upstream from Sweathouse Creek, 3.4 miles northwest of Mannboro, Amelia County, and 7.5 miles southeast of Amelia.

Drainage area.--156 sq mi.

Records available.--September 1946 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 177.20 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Sept. 2, 1949, staff gage at same site and datum.

Average discharge.--14 years (1946-60), 141 cfs.

Extremes.--1946-60: Maximum discharge, 7,140 cfs Sept. 25, 1947 (gage height, 13.1 ft, from floodmarks); minimum, 2.4 cfs Sept. 17, 18, 1954, July 24, 1955; minimum gage height, 0.65 ft Sept. 17, 18, 1954.

Flood in August 1940 reached a stage of 14.8 ft (discharge, 10,000 cfs, from rating curve extended above 3,800 cfs by logarithmic plotting), from information by local resident.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	64.5	71.6	166	97.0	146	184	187	62.7	71.4	89.1	59.4	37.8	103
1952	32.2	108	222	298	202	390	292	103	46.3	77.4	65.1	93.8	161
1953	41.8	297	128	260	258	270	189	104	87.4	28.9	21.2	57.1	143
1954	35.0	44.6	129	250	122	179	176	210	51.7	22.6	26.3	5.46	103
1955	32.9	42.4	93.8	59.7	158	210	150	51.9	43.7	21.6	266	67.5	99.6
1956	380	82.1	73.2	77.8	229	174	192	78.7	104	42.2	42.3	26.5	125
1957	67.0	107	100	103	359	258	214	45.6	119	17.2	51.7	213	134
1958	73.2	265	443	277	296	306	400	300	102	54.4	123	24.6	222
1959	56.4	62.8	216	152	133	110	312	70.7	52.1	84.5	37.6	18.6	109
1960	82.5	254	172	153	426	275	315	185	53.8	32.8	52.2	98.1	174

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.48	0.51	1.22	0.72	0.97	1.36	1.34	0.46	0.51	0.66	0.44	0.27	8.94
1952	.24	.77	1.64	2.20	1.33	2.88	2.09	.76	.33	.57	.48	.67	14.02
1953	.31	2.12	.95	1.92	1.59	1.99	1.35	.77	.62	.21	.16	.41	12.40
1954	.24	.32	.95	1.70	.81	1.33	1.26	1.56	.37	.17	.19	.04	8.94
1955	.24	.30	.69	.44	1.05	1.56	1.07	.38	.31	.16	1.97	.48	8.65
1956	2.81	.59	.54	.58	1.58	1.29	1.37	.58	.74	.31	.31	.19	10.89
1957	.49	.77	.74	.76	2.40	1.76	1.53	.34	.85	.13	.38	1.53	11.68
1958	.54	1.90	3.27	2.05	1.98	2.26	2.86	2.21	.75	.40	.91	.18	19.29
1959	.42	.45	1.59	1.12	.89	.81	2.23	.52	.37	.62	.28	.13	9.43
1960	.61	1.82	1.27	1.13	2.94	2.03	2.25	1.37	.38	.24	.39	.70	15.13

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1203	900	Mar. 21, 1951	16	103	0.660	8.94	124	10.76
1952	1233	2,590	Dec. 22, 1951	21	161	1.03	14.02	169	9.58
1953	1273	4,980	Nov. 21, 1952	4.8	143	.917	12.40	121	10.53
1954	1333	1,300	May 22, 1954	2.6	103	.660	8.94	99.5	8.66
1955	1383	3,720	Aug. 19, 1955	2.6	99.6	.638	8.65	131	11.36
1956	1433	7,020	Oct. 15, 1955	9	125	.601	10.89	103	8.95
1957	1503	2,240	Sept. 18, 1957	4.8	134	.859	11.68	177	15.39
1958	(a)	2,160	Apr. 12, 1958	16	222	1.42	19.29	184	16.04
1959	(a)	3,910	Dec. 30, 1958	10	109	.699	9.43	123	10.67
1960	(a)	3,480	Nov. 25, 1959	16	174	1.12	15.13	-	-

a Bulletin 25: Virginia Department of Conservation and Economic Development, Division of Water Resources.

415. Appomattox River near Petersburg, Va.

Location.--Lat 37°13'33", long 77°32'20", on right bank 2.2 miles upstream from dam of Virginia Electric and Power Co., 4.2 miles downstream from Whipponook Creek, and 5.9 miles west of corporate limits of city of Petersburg, Dinwiddie County.

Drainage area.--1,335 sq mi.

Records available.--October 1926 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Altitude of gage is 118 ft (by barometer). Prior to Sept. 22, 1931, at site 0.8 mile downstream at different datum.

Average discharge.-- 34 years (1926-60), 1,173 cfs.

Extremes.--1926-60: Maximum discharge, 28,000 cfs Aug. 20, 1940 (gage height, 18.15 ft); minimum, 19 cfs Sept. 21-27, 1932.

Remarks.--Records of chemical analyses for the period October 1951 to September 1952 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	703	657	1,354	910	1,378	1,602	1,569	687	654	536	388	367	897
1952	238	1,016	2,068	2,331	2,158	3,219	2,234	1,187	463	419	480	705	1,375
1953	316	1,771	976	2,163	1,870	2,496	1,680	942	631	313	166	302	1,130
1954	222	324	769	1,885	1,059	1,458	1,375	1,818	555	186	169	83.4	826
1955	256	330	843	419	1,050	1,851	1,266	649	414	320	2,962	701	925
1956	1,659	675	530	590	1,771	1,383	1,529	619	816	377	434	265	883
1957	551	1,087	1,004	898	2,884	1,950	1,589	405	827	158	256	777	1,017
1958	503	1,658	2,920	2,360	2,251	2,649	2,896	2,689	983	472	1,033	331	1,731
1959	479	511	1,085	1,855	1,042	900	2,267	637	428	617	344	169	860
1960	581	1,307	1,150	1,133	3,208	2,129	2,282	1,639	625	248	395	1,008	1,298

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.61	0.55	1.16	0.79	1.07	1.38	1.32	0.59	0.55	0.46	0.34	0.31	9.13
1952	.21	.85	1.79	2.02	1.75	2.78	1.86	1.02	.39	.36	.42	.59	14.04
1953	.27	1.48	.84	1.87	1.46	2.16	1.41	.81	.53	.27	.14	.25	11.49
1954	.19	.27	.66	1.63	.83	1.26	1.15	1.57	.46	.16	.15	.07	8.40
1955	.22	.28	.73	.36	.82	1.60	1.07	.56	.35	.28	2.56	.59	9.42
1956	1.43	.56	.46	.51	1.43	1.20	1.28	.53	.68	.33	.37	.22	9.00
1957	.48	.91	.87	.78	2.25	1.68	1.33	.35	.69	.14	.22	.65	10.35
1958	.43	1.38	2.52	2.04	1.76	2.32	2.42	2.32	.82	.41	.89	.28	17.59
1959	.41	.43	.94	1.60	.81	.78	1.89	.55	.36	.53	.30	.14	8.74
1960	.50	1.09	.99	.98	2.59	1.64	1.91	1.42	.52	.21	.34	.84	13.23

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,161	11.80
1951	1203	4,660	Mar. 21, 1951	191	897	0.672	9.13	948	9.66
1952	1233	7,950	Apr. 28, 1952	181	1,375	1.03	14.04	1,351	13.78
1953	1273	7,800	Nov. 23, 1952	63	1,130	.846	11.49	986	10.02
1954	1333	7,650	May 23, 1954	49	826	.619	8.40	836	8.51
1955	1383	10,300	Aug. 22, 1955	63	925	.693	9.42	1,046	10.64
1956	1433	7,500	Oct. 1, 1955	109	883	.661	9.00	863	8.81
1957	1503	5,890	Mar. 1, 1957	50	1,017	.762	10.35	1,222	12.42
1958	1553	7,800	May 8, 1958	256	1,731	1.30	17.59	1,479	15.04
1959	1623	7,950	Jan. 1, 1959	82	860	.644	8.74	939	9.54
1960	1703	7,220	Apr. 6, 1960	130	1,298	.972	13.23	-	-

† Corrected.

425. Chickahominy River near Providence Forge, Va.

Location.--Lat 37°26'10", long 77°03'40", on left bank 100 ft downstream from highway bridge, 1.1 miles southwest of Providence Forge, New Kent County, and 1.7 miles downstream from Schiminee Creek.

Drainage area.--249 sq mi.

Records available.--January 1942 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 6.07 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--18 years (1942-60), 271 cfs.

Extremes.--1942-60: Maximum discharge, 7,710 cfs Aug. 15, 1955 (gage height, 11.67 ft); minimum, 3.4 cfs Aug. 1, 1954; minimum gage height, 1.56 ft Aug. 25, 26, 1943.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	87.1	78.7	182	141	222	316	247	120	180	47.5	76.2	31.4	144
1952	39.0	171	358	468	568	685	465	418	73.5	69.5	76.7	95.1	288
1953	49.9	375	259	489	466	495	376	149	67.6	25.1	18.7	37.0	232
1954	21.5	74.6	141	247	261	274	215	258	54.1	12.7	17.0	7.42	131
1955	11.8	27.3	78.0	58.7	158	278	173	99.2	73.5	157	1,445	349	242
1956	370	194	143	165	458	358	347	174	198	229	113	74.0	235
1957	111	554	365	289	729	716	318	118	196	21.8	70.6	93.3	295
1958	384	318	1,043	613	656	802	707	595	218	109	245	96.8	482
1959	158	145	216	474	262	200	561	156	81.7	625	288	89.4	270
1960	154	562	388	334	635	584	568	195	64.3	103	618	510	391

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.40	0.35	0.84	0.65	0.93	1.46	1.11	0.56	0.81	0.22	0.35	0.14	7.82
1952	.18	.77	1.57	2.17	2.46	3.16	2.09	1.94	.33	.32	.36	.43	15.78
1953	.23	1.68	1.20	2.26	1.95	2.28	1.68	.89	.30	.12	.09	.17	12.65
1954	.10	.34	.65	1.14	1.09	1.27	.96	1.20	.24	.06	.08	.03	7.16
1955	.05	.12	.36	.27	.58	1.29	.78	.46	.33	.73	6.69	1.56	13.22
1956	1.72	.87	.66	.76	1.98	1.66	1.55	.81	.89	1.06	.52	.33	12.81
1957	.51	2.48	1.70	1.34	3.05	3.32	1.43	.55	.88	.10	.33	.42	16.11
1958	1.78	1.43	4.83	2.84	2.74	3.71	3.17	2.76	.98	.50	1.13	.43	26.30
1959	.73	.65	1.00	2.19	1.10	.92	2.51	.63	.37	2.89	1.34	.40	14.73
1960	.71	2.52	1.80	1.55	2.75	2.70	2.55	.90	.29	.48	2.86	2.29	21.40

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	178	9.69
1951	1203	575	Mar. 26, 1951	18	144	0.578	7.82	160	8.75
1952	1233	1,590	May 1, 1952	18	288	1.16	15.78	299	16.37
1953	1273	1,820	Nov. 25, 1952	5.5	232	.932	12.65	195	10.63
1954	1333	767	Jan. 29, 1954	4.1	131	.526	7.16	121	6.60
1955	1583	7,710	Aug. 15, 1955	6.5	242	.972	13.22	292	15.94
1956	1433, 1553	1,180	Oct. 20, 1955	22	235	.944	12.81	261	14.25
1957	1503	1,700	Mar. 3, Nov. 4	22	295	1.18	16.11	356	19.46
1958	1553	1,820	Dec. 25, 1957	36	482	1.94	26.30	379	20.64
1959	1623	1,590	Aug. 12, 1959	18	270	1.08	14.73	319	17.38
1960	1703	2,500	Sept. 15, 1960	22	391	1.57	21.40	-	-

435. Cypress Swamp at Cypress Chapel, Va.

Location.--Lat 36°37'30", long 76°36'10", on right bank 10 ft upstream from bridge on State Highway 32, 0.5 mile downstream from Dragon Swamp, 0.8 mile northwest of Cypress Chapel, Nansemond County, and 6.5 miles south of Suffolk.

Drainage area.--23 sq mi, approximately.

Records available.--October 1953 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 30 ft (from topographic map).

Average discharge.--7 years (1953-60), 29.3 cfs.

Extremes.--1953-60: Maximum discharge, 1,190 cfs May 7, 1958; maximum gage height, 6.62 ft Sept. 12, 1960; no flow at times.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	0	0.17	15.0	81.9	30.2	43.1	19.4	23.5	0.87	0	0	0	17.9
1955	0	0	7.88	11.0	26.1	47.1	13.4	5.49	7.65	2.98	39.7	138	24.7
1956	3.82	21.4	20.0	42.4	91.6	55.1	48.4	12.8	4.13	.45	16.1	26.8	28.3
1957	65.6	31.0	37.7	39.4	135	83.8	34.2	.04	.18	0	1.93	3.05	35.4
1958	18.8	48.4	87.2	70.7	46.1	74.2	74.0	120	5.29	.14	6.51	0	46.1
1959	0	.500	22.3	21.7	21.9	29.9	61.5	.974	0	20.3	31.2	0	17.5
1960	84.0	23.0	45.5	53.5	98.9	41.0	15.5	12.9	.270	7.61	7.95	70.4	38.2

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	0	0.008	0.75	4.10	1.36	2.16	0.94	1.18	0.04	0	0	0	10.54
1955	0	0	.40	.55	1.18	2.36	.65	.28	.37	.15	1.99	6.69	14.62
1956	.19	1.04	1.00	2.12	4.29	2.77	2.34	.64	.20	.02	.81	1.30	16.72
1957	3.29	1.51	1.89	1.97	6.11	4.20	1.66	.002	.009	0	.10	.15	20.89
1958	.94	2.34	4.37	3.54	2.08	3.72	3.59	6.02	.26	.007	.33	0	27.20
1959	0	.024	1.12	1.09	.99	1.50	2.98	.049	0	1.02	1.57	0	10.34
1960	4.21	1.12	2.28	2.69	4.64	2.05	.75	.65	.03	.38	.40	3.41	22.61

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-
1954	1333	552	Jan. 23, 1954	0	17.9	0.778	10.54	14.3	8.43
1955	1383	1,170	Sept. 20, 1955	0	24.7	1.07	14.62	27.8	18.45
1956	1433	392	Mar. 17, 1956	0	28.3	1.23	16.72	35.8	21.18
1957	1503	690	Feb. 1, 1957	0	35.4	1.54	20.89	37.1	21.85
1958	(a)	1,130	May 7, 1958	0	46.1	2.00	27.20	35.1	20.89
1959	(a)	735	Aug. 1, 1959	0	17.5	.761	10.34	28.5	16.81
1960	(a)	1,130	Sept. 12, 1960	0	38.2	1.66	22.61	-	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

440. Nottoway River near Burkeville, Va.

Location.--Lat 37°04'40", long 78°11'50", on left bank at downstream side of bridge on State Highway 723, 2½ miles upstream from Modest Creek, 6 miles north of Victoria, and 7½ miles south of Burkeville, Nottoway County.

Drainage area.--38 sq mi, approximately.

Records available.--September 1946 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 354.58 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 4, 1951, wire-weight gage at same site and datum.

Average discharge.--14 years (1946-60), 36.5 cfs.

Extremes.--1946-60: Maximum discharge, 3,320 cfs Aug. 18, 1955 (gage height, 19.06 ft); no flow Aug. 29 to Oct. 14, 1954.

Maximum stage known, 27.4 ft August 1940, from Corps of Engineers floodmark.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	22.1	26.1	69.0	29.6	41.2	65.2	44.1	12.8	10.1	9.05	3.67	5.86	28.0
1952	2.84	22.8	48.9	63.2	53.6	126	96.2	16.7	7.58	2.77	4.01	14.4	38.2
1953	3.48	23.9	23.7	76.7	64.5	77.3	41.5	15.1	12.6	4.55	4.81	3.10	29.1
1954	4.37	4.74	25.1	72.3	27.9	69.1	71.9	58.1	4.65	1.20	.73	0	28.4
1955	3.58	5.13	19.3	11.6	45.2	56.3	65.6	13.4	8.33	5.95	110	34.6	31.5
1956	132	22.0	15.5	15.4	74.3	55.8	56.3	18.5	18.2	13.0	3.30	3.75	35.5
1957	9.87	23.8	18.9	28.3	91.2	50.0	58.5	7.74	21.1	1.28	6.23	50.4	30.0
1958	9.76	82.2	96.1	88.7	96.3	72.2	109	85.9	21.7	7.50	35.8	6.91	59.1
1959	12.5	14.9	71.7	37.3	37.4	29.0	74.1	14.7	7.02	40.7	5.60	6.51	29.3
1960	9.23	45.0	42.3	41.1	138	80.4	84.1	55.0	11.2	5.75	11.0	17.8	44.6

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.67	0.77	2.10	0.90	1.12	1.97	1.29	0.39	0.30	0.27	0.11	0.11	10.00
1952	.09	.67	1.49	1.91	1.52	5.85	2.82	.51	.22	.08	.12	.42	13.68
1953	.11	.70	.72	2.33	1.77	2.34	1.22	.46	.37	.14	.15	.09	10.40
1954	.13	.14	.76	2.19	.76	2.10	2.11	1.76	.14	.04	.02	0	10.15
1955	.11	.15	.59	.35	1.24	1.71	1.93	.41	.24	.18	3.33	1.02	11.26
1956	4.00	.65	.47	.47	2.11	1.70	1.65	.56	.53	.39	.10	.11	12.74
1957	.30	.70	.57	.86	2.50	1.52	1.72	.24	.62	.04	.19	1.48	10.74
1958	.30	2.41	2.92	2.69	2.64	2.19	3.20	2.61	.64	.23	1.09	.20	21.12
1959	.58	.44	2.18	1.13	1.02	.88	2.18	.45	.21	1.23	.17	.19	10.46
1960	.28	1.32	1.28	1.24	3.92	2.44	2.47	1.67	.33	.17	.33	.52	15.97

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	40.0	14.29	
1951	1203	858	Mar. 20, 1951	1.0	28.0	0.737	10.00	24.4	8.71	
1952	1233	2,010	Apr. 28, 1952	.6	38.2	1.01	13.68	36.2	12.96	
1953	1273	1,640	Jan. 24, 1953	.7	29.1	.766	10.40	27.7	9.90	
1954	1383	1,810	Mar. 1, 1954	0	28.4	.747	10.15	27.9	9.97	
1955	1383	3,320	Aug. 18, 1955	0	31.5	.829	11.26	45.4	15.53	
1956	1433	3,200	Oct. 1, 1955	.5	35.5	.954	12.74	25.7	9.19	
1957	1503	2,980	Sept. 18, 1957	.1	30.0	.789	10.74	41.4	14.80	
1958	(a)	1,730	Jan. 25, 1958	3.0	59.1	1.56	21.12	51.8	18.49	
1959	(a)	1,890	Dec. 29, 1958	1.4	29.3	.771	10.46	29.0	10.34	
1960	(a)	2,010	Feb. 19, 1960	2.0	44.6	1.17	15.97	-	-	

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

445. Nottoway River near Rawlings, Va.

Location.--Lat 36°59'00", long 77°48'00", on right bank at downstream side of bridge on State Highway 612, at Harpers Bridge, 2.6 miles northwest of Rawlings, Brunswick County.

Drainage area.--323 sq mi.

Records available.--October 1950 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 174 ft (by barometer).

Average discharge.--10 years (1950-60), 306 cfs.

Extremes.--1950-60: Maximum discharge, 6,580 cfs Oct. 2, 1955 (gage height, 12.82 ft); minimum, 0.4 cfs Oct. 14-15, 1954; minimum gage height, 1.83 ft Oct. 15, 1954.
Flood in August 1940 reached a stage of 20.8 ft, from information by local resident (discharge, about 19,000 cfs).

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	164	167	340	238	343	374	361	140	97.8	95.6	50.3	60.6	202
1952	55.8	193	464	679	458	864	769	255	112	79.2	104	183	351
1953	74.4	520	232	562	512	585	452	302	195	71.3	39.7	34.7	297
1954	40.5	70.6	198	441	250	375	345	412	122	34.0	31.0	3.62	194
1955	18.4	65.3	144	102	263	387	350	127	110	134	650	222	214
1956	893	218	175	178	545	447	506	217	246	210	113	81.4	318
1957	216	262	265	268	861	582	441	166	222	43.7	71.0	428	314
1958	126	506	893	663	654	697	930	893	278	160	280	95.1	514
1959	162	163	391	339	321	273	573	160	84.7	329	86.1	69.3	246
1960	164	552	377	352	890	594	679	545	166	119	266	185	405

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.59	0.58	1.21	0.85	1.10	1.34	1.25	0.50	0.34	0.54	0.18	0.21	8.49
1952	.20	.67	1.66	2.42	1.53	3.08	2.66	.91	.39	.28	.37	.63	14.80
1953	.27	1.80	.83	2.01	1.66	2.09	1.56	1.08	.67	.25	.14	.12	12.48
1954	.14	.24	.71	1.58	.81	1.34	1.19	1.48	.42	.12	.11	.01	8.15
1955	.07	.23	.51	.56	.85	1.38	1.21	.45	.38	.48	2.32	.77	9.01
1956	3.18	.75	.62	.64	1.82	1.59	1.75	.77	.85	.75	.40	.28	13.40
1957	.77	.90	.95	.96	2.78	2.08	1.53	.59	.77	.16	.25	1.48	13.22
1958	.45	1.75	3.18	2.36	2.10	2.49	3.21	3.18	.96	.57	1.00	.33	21.58
1959	.58	.56	1.40	1.21	1.04	.97	1.98	.57	.29	1.18	.31	.24	10.33
1960	.59	1.91	1.35	1.26	2.98	2.12	2.34	1.95	.57	.42	.95	.64	17.08

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1233	1,690	Mar. 21, 1951	23	202	0.625	8.49	205	8.64
1952	1233	4,240	Dec. 22, 1951	34	351	1.09	14.80	360	15.17
1953	1273	6,020	Nov. 21, 1952	16	297	.920	12.48	254	10.67
1954	1333	2,110	May 22, 1954	1.6	194	.601	8.15	187	7.87
1955	1393	6,420	Aug. 19, 1955	.4	214	.663	9.01	304	12.75
1956	1433	6,580	Oct. 2, 1955	36	318	.985	13.40	272	11.47
1957	1503	4,090	Sept. 19, 1957	8.5	314	.972	13.22	380	15.98
1958	(a)	5,300	May 7, 1958	73	514	1.59	21.58	446	18.74
1959	(a)	3,940	Dec. 31, 1958	35	246	.762	10.33	277	11.64
1960	(a)	5,140	Nov. 25, 1959	56	405	1.25	17.08	-	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

455. Nottoway River near Stony Creek, Va.

Location.--Lat 36°54'00", long 77°24'00", on left bank 15 ft downstream from upstream bridge on U.S. Highway 301, 1.8 miles upstream from Island Swamp, 3.3 miles south of town of Stony Creek, Sussex County, and 4.4 miles upstream from Stony Creek.

Drainage area.--586 sq mi.

Records available.--October 1929 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 58.42 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 11, 1934, chain gage at same site and datum.

Average discharge.--31 years (1929-60), 553 cfs.

Extremes.--1929-60: Maximum discharge, 25,200 cfs Aug. 17, 1940 (gage height, 23.66 ft), from rating curve extended above 13,000 cfs by logarithmic plotting on basis of records for stations on Appomattox River; minimum, 5 cfs Sept. 2, 5, 1932 (gage height, 0.62 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	302	287	588	420	543	769	673	241	211	198	91.3	93.5	367
1952	84.7	339	792	1,458	989	1,600	1,400	560	184	129	199	257	664
1953	131	838	397	1,005	1,012	985	756	410	242	99.9	55.5	44.2	494
1954	50.7	86.0	250	707	430	631	551	896	242	49.4	42.5	13.6	329
1955	19.8	50.7	155	113	408	718	486	150	144	226	1,310	410	350
1956	1,206	343	284	324	1,085	824	867	351	459	420	206	140	540
1957	560	637	657	652	1,823	1,273	813	398	363	95.3	118	479	647
1958	204	767	1,783	1,155	1,054	1,406	1,477	1,878	475	335	558	144	956
1959	219	235	575	776	614	501	1,066	280	126	536	128	103	429
1960	286	1,067	707	703	1,753	1,130	1,118	969	308	214	350	292	756

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.59	0.55	1.15	0.83	0.97	1.51	1.28	0.47	0.40	0.39	0.18	0.18	8.50
1952	.17	.64	1.56	2.82	1.82	3.15	2.67	1.10	.35	.25	.39	.49	15.41
1953	.26	1.60	.78	1.98	1.80	1.94	1.44	.81	.46	.20	.11	.08	11.46
1954	.10	.16	.49	1.40	.76	1.24	1.05	1.76	.46	.10	.08	.03	7.63
1955	.04	.10	.31	.22	.72	1.42	.92	.30	.27	.44	2.58	.78	8.10
1956	2.38	.65	.56	.64	2.00	1.63	1.65	.69	.87	.83	.41	.27	12.58
1957	1.10	1.22	1.29	1.28	3.24	2.50	1.55	.78	.69	.19	.23	.91	14.98
1958	.40	1.46	3.50	2.27	1.87	2.77	2.81	3.69	.90	.65	1.06	.27	21.65
1959	.43	.44	1.13	1.53	1.09	.99	2.03	.55	.24	1.06	.25	.20	9.94
1960	.56	2.03	1.39	1.38	3.23	2.22	2.13	1.91	.59	.42	.69	.56	17.11

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	490	11.35
1951	1203	2,510	Mar. 20, 1951	42	367	0.626	8.50	370	8.58
1952	1233	7,600	Apr. 28, 1952	43	664	1.13	15.41	675	15.68
1953	1273	6,140	Nov. 23, 1952	22	494	.843	11.46	413	9.57
1954	1333	6,270	May 22, 1954	6.8	329	.561	7.63	316	7.33
1955	1383	6,850	Aug. 21, 1955	5.8	350	.597	8.10	485	11.24
1956	1433	6,400	Oct. 4, 1955	54	540	.922	12.58	541	12.60
1957	1503	4,920	Feb. 2, 1957	15	647	1.10	14.98	723	16.73
1958	1553	8,090	May 7, 1958	98	936	1.60	21.65	791	18.29
1959	1623	4,460	Dec. 30, 1958	45	429	.732	9.94	514	11.92
1960	1703	5,430	Nov. 27, 1959	76	736	1.26	17.11	-	-

460. Stony Creek near Dinwiddie, Va.

Location.--Lat 37°04'00", long 77°36'10", on right bank at upstream side of bridge on U.S. Highway 1, 1.2 miles southwest of Dinwiddie, Dinwiddie County, 1.7 miles downstream from Chamberlains Bed Creek, and 5.7 miles downstream from confluence of White Oak and Butterwood Creeks.

Drainage area.--111 sq mi.

Records available.--September 1946 to September 1960. Published as "at Dinwiddie" September 1946 to September 1947 and October 1949 to September 1950.

Gage.--Water-stage recorder. Altitude of gage is 131 ft (by barometer). Prior to June 12, 1957, wire-weight and crest-stage gages at same site and datum.

Average discharge.--14 years (1946-60), 112 cfs.

Extremes.--1946-60: Maximum discharge, 3,980 cfs Nov. 7, 1959 (gage height, 12.62 ft); no flow for part of Oct. 13, 1954.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	44.0	47.8	131	92.5	127	154	134	56.4	37.8	40.1	16.7	17.3	74.7
1952	11.5	45.8	128	292	181	346	377	84.7	31.3	17.3	27.9	41.0	132
1953	16.7	131	60.7	256	250	216	173	80.7	63.5	10.6	4.55	11.5	105
1954	6.03	13.1	55.7	154	85.2	108	87.4	144	46.9	9.44	2.88	.18	59.4
1955	.12	3.97	18.5	17.6	68.2	155	94.4	31.7	36.4	35.8	288	106	71.2
1956	184	73.6	59.0	81.9	215	139	176	59.1	82.1	83.5	40.6	33.5	102
1957	217	206	165	150	406	236	118	45.2	136	13.0	13.4	53.1	145
1958	57.3	169	426	240	261	298	330	351	116	61.6	63.3	14.4	199
1959	25.5	29.0	125	130	120	106	240	47.8	22.9	210	27.8	17.4	91.8
1960	74.4	389	191	159	396	269	217	141	27.7	17.4	77.0	124	172

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.46	0.48	1.36	0.96	1.19	1.60	1.35	0.59	0.38	0.42	0.17	0.17	9.13
1952	.12	.46	1.33	3.03	1.76	3.60	3.79	.88	.31	.18	.29	.41	16.16
1953	.17	1.32	.63	2.66	2.34	2.25	1.74	.84	.64	.11	.05	.12	12.87
1954	.06	.13	.58	1.60	.78	1.12	.88	1.50	.47	.10	.03	.002	7.25
1955	.001	.04	.17	.18	.64	1.61	.95	.33	.37	.37	2.99	1.07	8.72
1956	1.91	.74	.61	.85	2.09	1.44	1.77	.61	.85	.87	.42	.34	12.48
1957	2.25	2.08	1.72	1.56	3.81	2.46	1.18	.47	1.37	.13	.14	.53	17.70
1958	.59	1.70	4.43	2.49	2.45	3.09	3.31	3.64	1.17	.64	.66	.14	24.31
1959	.27	.29	1.30	1.35	1.12	1.10	2.41	.50	.23	2.18	.29	.18	11.22
1960	.77	3.90	1.98	1.65	3.85	2.79	2.18	1.46	.28	.18	.80	1.25	21.09

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	95.9	11.74
1951	1203	771	Mar. 20, 1951	4.2	74.7	0.673	9.13	71.5	8.74
1952	1233	2,530	Jan. 29, 1952	1.7	132	1.19	16.16	133	16.37
1953	1273	2,190	Jan. 25, 1953	.7	105	.946	12.87	94.1	11.52
1954	1333	1,510	May 21, 1954	.1	59.4	.535	7.25	54.8	6.69
1955	1383	3,000	Aug. 18, 1955	.1	71.2	.641	8.72	96.2	11.77
1956	1433	1,830	Oct. 1, 1955	7.8	102	.919	12.48	124	15.27
1957	1503	2,600	Oct. 28, 1956	3.1	145	1.31	17.70	150	18.37
1958	(a)	2,840	May 7, 1958	8.4	199	1.79	24.31	159	19.45
1959	(a)	1,730	Dec. 29, 1958	6.2	91.8	.827	11.22	131	16.01
1960	(a)	3,980	Nov. 7, 1959	3.4	172	1.55	21.09	-	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

Location.--Lat 36°55'10", long 77°15'45", on right bank 20 ft downstream from bridge on State Highway 40, 1.0 mile east of Sussex, Sussex County, and 1.5 miles upstream from mouth.

Revisions.--The momentary maximum discharge for the water years 1949 and 1950 and one daily discharge in the water year 1950 were revised in WSP 1703. The resulting revised records as summarized herewith supersede those published in WSP 1303.

Month	Mean	Per square mile	Runoff in inches	Momentary maximum		Maximum day
				Discharge	Date	
-	-	-	-	96	Aug. 15, 1949	-
September 1950.....	13.2	2.44	2.72	-	-	-
Water year 1949-50....	3.66	.678	9.20	228	Sept. 12, 1950	0
Calendar year 1950....	4.12	-	10.37	-	-	0

[illegible][illegible][illegible]

470. Nottoway River near Sebrell, Va.

Location.--Lat 36°46'13", long 77°09'59", on right bank 1,000 ft upstream from bridge on State Highway 653 (relocated), 1 mile downstream from Three Creek, 2.5 miles southwest of Sebrell, Southampton County, and 5 miles (revised) upstream from Assamoosick Swamp.

Drainage area.--1,451 sq mi.

Records available.--September 1941 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 5.94 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Aug. 23, 1950, wire-weight gage at same site and datum.

Average discharge.--19 years (1941-60), 1,284 cfs.

Extremes.--1941-60: Maximum discharge, 25,000 cfs July 22, 1945 (gage height, 24.5 ft); minimum observed, 12 cfs Oct. 23, 1941; minimum gage height, 3.10 ft Oct. 13-15, 1954. Flood in August 1940 reached a stage of 29.7 ft, from floodmarks (discharge, 48,000 cfs, from rating curve extended above 25,000 cfs by logarithmic plotting).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	689	547	1,227	978	1,227	1,824	1,657	511	459	289	228	143	813
1952	116	565	1,420	2,739	3,690	4,260	2,208	2,280	366	212	350	303	1,538
1953	173	1,192	1,009	2,145	2,452	2,435	1,872	841	403	158	88.0	67.4	1,060
1954	62.5	127	462	1,405	1,146	1,945	1,451	2,669	603	128	107	27.8	837
1955	27.4	74.3	210	212	670	1,645	863	331	231	340	2,851	1,409	739
1956	1,762	756	748	1,014	2,658	2,134	2,099	907	1,059	706	399	260	1,202
1957	846	2,304	2,131	1,809	4,710	3,966	1,970	577	817	128	275	607	1,656
1958	472	1,154	4,310	2,967	2,524	3,756	3,774	5,092	1,178	665	1,126	339	2,285
1959	509	497	770	2,699	1,644	1,218	3,151	637	269	1,165	391	216	1,093
1960	559	1,710	1,849	1,727	4,304	3,263	2,767	1,408	838	507	1,580	1,471	1,820

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.55	0.42	0.98	0.78	0.88	1.45	1.27	0.41	0.35	0.23	0.18	0.11	7.61
1952	.09	.43	1.13	2.18	2.74	3.39	1.70	1.81	.28	.17	.28	.23	14.43
1953	.14	.92	.80	1.71	1.76	1.94	1.44	.67	.31	.13	.07	.05	9.94
1954	.05	.10	.37	1.12	.82	1.46	1.12	2.12	.46	.10	.09	.02	7.83
1955	.02	.06	.17	.17	.48	1.30	.66	.26	.18	.27	2.25	1.08	6.90
1956	1.40	.58	.59	.81	1.97	1.70	1.62	.72	.81	.56	.32	.20	11.28
1957	.67	1.77	1.70	1.44	3.38	3.15	1.52	.46	.63	.10	.22	.47	15.51
1958	.37	.89	3.42	2.35	1.81	2.99	2.90	4.05	.91	.53	.89	.26	21.37
1959	.40	.58	.61	2.14	1.18	.97	2.42	.51	.21	.93	.31	.17	10.23
1960	.44	1.31	1.47	1.37	3.20	2.59	2.13	1.12	.64	.40	1.26	1.13	17.06

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,150	10.76
1951	1203	4,090	Mar. 24, 1951	93	813	0.560	7.61	782	7.31
1952	1233	12,000	May 1, 1952	78	1,538	1.06	14.43	1,559	14.64
1953	1273	5,260	Nov. 26, 1952	33	1,060	.731	9.94	917	8.60
1954	1333	10,100	May 25, 1954	18	837	.577	7.83	808	7.56
1955	1383	10,700	Aug. 24, 1955	14	739	.509	6.90	988	9.22
1956	1433	5,920	Feb. 11, 1956	95	1,202	.828	11.28	1,369	12.85
1957	1503	9,440	Feb. 5, 1957	35	1,656	1.14	15.51	1,715	16.05
1958	1553	16,900	May 10, 1958	161	2,285	1.57	21.37	1,934	18.08
1959	1623	8,240	Jan. 3, 1959	86	1,093	.753	10.23	1,289	12.06
1960	1703	8,400	Feb. 23, 1960	94	1,820	1.25	17.06	-	-

475. Blackwater River near Dendron, Va.

Location.--Lat 37°01'30", long 76°52'30", on left bank 10 ft upstream from Walls Bridge, 1.2 miles downstream from Cypress Swamp, and 3.5 miles southeast of Dendron, Surry County.

Drainage area.--285 sq mi.

Records available.--October 1941 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 30.99 ft above mean level (Corps of Engineers bench mark).

Average discharge.--19 years (1941-60), 292 cfs.

Extremes.--1941-60: Maximum discharge, 4,710 cfs July 21, 1945 (gage height, 8.90 ft); no flow at times.

Flood in August 1940 reached a stage of 13.1 ft, from Corps of Engineers floodmarks (discharge, 10,000 cfs, from rating curve extended above 4,800 cfs by logarithmic plotting).

Cooperation.--Subsequent to Sept. 30, 1958, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	160	116	234	241	255	389	319	89.7	119	106	189	22.0	186
1952	31.3	238	350	861	937	1,082	377	277	26.7	5.72	15.1	3.75	349
1953	8.91	201	188	383	422	611	400	120	20.4	36.2	7.16	.22	199
1954	†.17	8.96	114	305	367	459	205	634	118	4.44	.11	0	184
1955	0	0	8.51	37.2	158	359	127	43.9	85.9	82.7	735	429	172
1956	238	149	152	278	690	414	489	203	173	144	132	75.4	260
1957	225	634	502	511	1,205	1,072	362	64.0	236	162	7.51	41.0	399
1958	221	459	1,240	699	579	860	864	879	549	162	789	140	622
1959	131	148	280	794	366	251	779	120	23.5	389	126	19.3	285
1960	109	311	392	394	1,047	852	628	198	40.7	258	629	842	472

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.65	0.45	0.95	0.98	0.93	1.57	1.25	0.36	0.47	0.43	0.76	0.09	8.89
1952	.13	.93	1.42	3.48	3.55	4.38	1.47	1.12	.10	.02	.06	.01	16.67
1953	.04	.79	.75	1.54	1.54	2.47	1.58	.49	.08	.15	.03	.001	9.45
1954	.0007	.03	.46	1.23	1.34	1.86	.80	2.56	.46	.02	.0005	0	8.76
1955	0	0	.03	.15	.58	1.45	.50	.18	.34	.33	2.97	1.68	8.21
1956	.96	.58	.61	1.12	2.61	1.67	1.92	.82	.68	.58	.53	.30	12.38
1957	.91	2.48	2.03	2.06	4.40	4.34	1.42	.26	.92	.001	.03	.16	19.01
1958	.89	1.80	5.02	2.82	2.11	3.48	3.38	3.55	2.15	.65	3.19	.55	29.59
1959	.53	.58	1.13	3.22	1.33	1.02	3.05	.49	.09	1.57	.51	.08	13.60
1960	.44	1.22	1.59	1.59	3.96	3.45	2.46	.80	.16	1.04	2.55	3.29	22.55

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	232	11.04
1951	1203	842	Mar. 22, 1951	1.6	186	0.653	8.89	195	9.32
1952	1233	2,490	Jan. 30, 1952	.7	349	1.22	16.67	331	15.78
1953	1273	1,220	Mar. 18, 1953	0	199	.698	9.45	176	8.35
1954	1333	1,680	May 23, 1954	0	184	.646	8.76	175	8.30
1955	1383	2,310	Aug. 19, 1955	0	172	.604	8.21	217	10.33
1956	1433	1,150	Feb. 13, 1956	.2	260	.912	12.38	328	15.65
1957	1503	2,130	Feb. 4, 5, 1957	0	399	1.40	19.01	447	21.30
1958	1553	3,300	Aug. 5, 1958	16	622	2.18	29.59	507	24.12
1959	(a)	2,190	Jan. 2, 1959	0	285	1.00	13.60	306	14.61
1960	(a)	3,800	Sept. 14, 1960	.3	472	1.66	22.55	-	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

480. Blackwater River at Zuni, Va.

Location.--Lat 36°52'05", long 76°50'07", on left bank at downstream side of bridge on U.S. Highway 460 at Zuni, Isle of Wight County, 1.6 miles downstream from Pope Swamp and 4.2 miles upstream from Antioch Swamp.

Drainage area.--448 sq mi.

Records available.--October 1942 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 8.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 18, 1957, staff gage at same site and datum.

Average discharge.--18 years (1942-60), 451 cfs.

Extremes.--1942-60: Maximum discharge, 5,680 cfs Sept. 14, 1960 (gage height, 17.47 ft); no flow Sept. 10-18, 1944, Sept. 28 to Oct. 31, 1954.

Flood in August 1940 reached a stage of 23.2 ft (discharge, 16,000 cfs, from rating curve extended above 5,100 cfs by logarithmic plotting).

Cooperation.--Subsequent to Sept. 30, 1958, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	175	138	283	295	333	532	397	139	247	99.7	244	27.3	242
1952	42.9	340	458	1,179	1,502	1,556	545	414	50.9	17.3	14.3	7.55	508
1953	10.7	258	323	539	598	847	556	154	26.3	56.6	54.8	5.21	284
1954	3.79	34.5	256	583	570	781	353	907	176	15.6	.89	.15	306
1955	0	.19	6.80	48.0	146	506	169	71.0	68.7	135	1,012	584	230
1956	438	196	262	434	1,034	699	705	384	240	121	251	103	403
1957	324	906	720	695	1,759	1,499	737	114	297	13.2	13.5	33.3	584
1958	285	475	1,588	1,022	910	1,386	1,382	827	265	920	263		892
1959	100	182	248	1,042	487	358	1,231	235	58.9	446	207	39.6	377
1960	330	415	584	597	1,392	1,171	832	383	98.9	201	967	1,507	703

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.45	0.34	0.73	0.76	0.77	1.37	0.99	0.36	0.61	0.26	0.63	0.07	7.34
1952	.11	.85	1.18	3.03	3.61	4.00	1.36	1.07	.13	.04	.04	.02	15.44
1953	.03	.64	.83	1.38	1.38	2.18	1.38	.40	.07	.15	.14	.01	8.59
1954	.01	.09	.68	1.50	1.32	2.01	.88	2.33	.44	.04	.002	.0004	9.28
1955	0	.0005	.02	.12	.34	1.30	.42	.18	.17	.35	2.61	1.45	6.96
1956	1.13	.49	.67	1.12	2.49	1.80	1.75	.99	.60	.31	.65	.26	12.26
1957	.83	2.25	1.86	1.79	4.09	3.86	1.84	.29	.74	.03	.03	.08	17.69
1958	.68	1.18	4.12	2.63	2.11	3.56	3.40	3.55	2.06	.68	2.36	.65	26.98
1959	.26	.45	.63	2.69	1.14	.92	2.81	.61	.15	1.15	.53	.10	11.44
1960	.85	1.03	1.50	1.53	3.35	3.01	2.08	.99	.25	.52	2.49	3.75	21.35

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean
		Discharge	Date					
1950	-	-	-	-	-	-	-	331
1951	1203	1,070	Mar. 24, 1951	9.0	242	0.540	7.34	262
1952	1233	2,920	Mar. 7, 1952	.6	508	1.13	15.44	487
1953	1273	1,260	Mar. 22, 1953	.5	284	.634	8.59	259
1954	1333	2,320	May 23, 1954	0	306	.683	9.28	282
1955	1383	2,620	Aug. 24, 1955	0	230	.513	6.96	305
1956	1433	1,620	Feb. 9, 10, 1956	3.9	403	.900	12.26	491
1957	1503	2,860	Feb. 4, 5, 1957	.6	584	1.30	17.69	618
1958	1553	4,240	May 9, 1958	18	892	1.99	26.98	739
1959	(a)	2,560	Jan. 4, 1959	2.6	377	.842	11.44	444
1960	(a)	5,680	Sept. 14, 1960	5.2	703	1.57	21.35	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

495. Blackwater River near Franklin, Va.

Location.--Lat 36°45'45", long 76°53'55", on right bank 0.4 mile south of town of Burdette, 0.5 mile upstream from Black Creek, 3.3 miles downstream from Corrowaugh Swamp, and 6 miles north of Franklin, Southampton County.

Drainage area.--613 sq mi.

Records available.--August 1944 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 1.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--16 years (1944-60), 627 cfs (adjusted for diversion).

Extremes.--1944-60: Maximum discharge, 9,420 cfs Sept. 14, 1960 (gage height, 17.14 ft, from floodmark); 0.4 cfs Sept. 10, 11, 1944 (gage height, 0.36 ft).

Flood in August 1940 reached a stage of about 22 ft (discharge, 21,000 cfs, from rating curve extended above 5,300 cfs by logarithmic plotting).

Remarks.--Diversion above station by city of Norfolk for municipal supply some years. Records of chemical analyses for the period November 1951 to September 1952 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	307	251	406	473	548	801	655	165	377	101	279	30.3	365
1952	52.6	425	596	1,573	1,873	2,289	767	532	61.8	20.1	26.7	13.0	683
1953	15.7	298	406	608	742	1,021	713	212	37.8	72.3	873	6.80	350
1954	11.2	35.4	263	812	803	1,099	526	1,228	262	44.5	7.55	7.33	424
1955	1.04	2.96	11.4	66.4	213	696	239	84.6	70.3	123	1,292	970	315
1956	565	253	352	567	1,391	941	979	387	213	79.7	228	148	505
1957	478	1,222	1,060	1,024	2,502	2,192	1,030	142	307	14.7	19.6	34.6	824
1958	258	516	2,082	1,446	1,273	1,965	1,972	1,890	861	263	925	410	1,155
1959	122	211	267	1,302	656	466	1,502	276	78.9	458	271	68.8	472
1960	593	617	802	828	1,902	1,529	1,040	444	144	237	1,334	2490	991

Monthly and yearly runoff, in inches (adjusted) a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.58	0.42	0.80	0.94	0.97	1.56	1.19	0.35	0.69	0.19	0.52	0.05	8.25
1952	.10	.77	1.12	2.96	5.30	4.30	1.40	1.00	.11	.04	.05	.02	15.17
1953	.05	.55	.81	1.21	1.31	1.94	1.29	.40	.07	.14	.16	.01	7.92
1954	.02	.06	.53	1.57	1.36	2.06	.96	2.31	.48	.08	.01	.01	9.45
1955	.002	.005	.02	.12	.38	1.37	.49	.21	.16	.29	2.46	1.76	7.27
1956	1.06	.46	.66	1.07	2.45	1.78	1.78	.73	.41	.18	.43	.27	11.28
1957	.91	2.22	1.99	1.92	4.25	4.13	1.87	.28	.57	.03	.04	.06	18.27
1958	.46	.94	3.92	2.72	2.17	3.70	3.59	3.55	1.56	.49	1.74	.75	25.59
1959	.23	.38	.51	2.49	1.17	.90	2.73	.52	.14	.89	.52	.14	10.62
1960	1.12	1.12	1.51	1.56	3.35	2.88	1.89	.83	.26	.45	2.51	4.53	22.01

a Adjusted for diversion by city of Norfolk.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted a/			Observed		Adjusted a/
		Momentary maximum		Minimum	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date	day							
1950	-	-	-	-	-	-	-	-	500	504	11.15
1951	1203	1,350	Mar. 24, 1951	7.3	365	373	0.608	8.28	376	385	8.45
1952	1233	4,190	Mar. 7, 1952	4	685	685	1.11	15.17	654	656	14.57
1953	1273	1,430	Mar. 22, 1953	2	350	359	.586	7.92	315	328	7.14
1954	1333	2,940	May 23, 1954	2.0	424	428	.698	9.45	399	401	8.87
1955	1383	3,660	Aug. 24, 1955	.7	315	329	.537	7.27	412	426	9.42
1956	1433	2,090	Feb. 10-13, 1956	4	505	507	.827	11.28	637	640	14.22
1957	1503	3,930	Feb. 4, 5, 1957	2.0	824	825	1.35	18.27	832	834	18.47
1958	1553	5,450	May 9, 1958	28	1,155	1,158	1.88	25.59	985	966	21.39
1959	1623	2,970	Jan. 5, 1959	4	472	480	.783	10.62	591	599	13.25
1960	1703	9,420	Sept. 14, 1960	10	991	991	1.62	22.01	-	-	-

a Adjusted for diversion by city of Norfolk.

505. North Meherrin River near Keysville, Va.

Location (revised).--Lat 37°03'05", long 78°25'20", on right bank at upstream side of highway bridge, 3.5 miles northeast of Keysville, Charlotte County, and 3.6 miles upstream from Owl Creek.

Drainage area.--9.2 sq mi, approximately.

Records available.--October 1948 to September 1960.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 475 ft (by barometer).

Average discharge.--12 years (1948-60), 9.50 cfs.

Extremes.--1948-60: Maximum discharge, 1,320 cfs Apr. 14, 1955 (gage height, 7.28 ft), from rating curve extended above 570 cfs by logarithmic plotting; minimum, 0.1 cfs Sept. 8, Oct. 4, 1954, Aug. 9, 1957, Aug. 22, 23, 1959; minimum gage height, 0.10 ft July 17-22, Aug. 31, 1953.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Revisions.--Some periods for the water years 1949 and 1950 were revised in WSP 1703. The resulting revised records as summarized herewith supersede those published in WSP 1303.

Month	Mean	Per square mile	Runoff in inches	Momentary maximum		Minimum day
				Discharge	Date	
November 1948.....	19.6	2.13	2.38	-	-	-
December.....	27.1	2.95	3.40	-	-	-
March 1949.....	13.2	1.43	1.65	-	-	-
Water year 1948-49.....	10.3	1.12	15.21	755	Dec. 4, 1948	0.9
Calendar year 1949.....	7.65	.832	11.28	-	-	-
July 1950.....	15.7	1.71	1.97	-	-	-
September.....	18.1	1.97	2.20	-	-	-
Water year 1949-50.....	9.18	.998	13.55	860	July 24, 1950	1.3

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	7.60	5.17	23.9	8.87	12.5	10.3	14.7	5.66	6.38	8.68	1.79	1.28	8.90
1952	1.25	3.67	28.0	28.6	38.9	38.4	24.1	13.8	2.15	4.17	8.15	6.12	16.2
1953	1.70	17.0	9.20	16.7	17.6	21.2	16.2	5.80	2.78	.82	3.78	1.94	9.49
1954	1.66	2.72	6.99	18.5	6.74	17.0	14.1	11.2	1.76	.65	1.22	.28	6.92
1955	2.36	3.00	7.25	3.50	11.0	14.7	19.6	4.02	5.32	4.63	21.8	7.08	8.67
1956	9.80	5.60	4.20	4.55	16.3	11.4	13.7	7.32	3.75	3.07	1.42	1.19	6.82
1957	2.35	5.63	5.63	7.77	19.2	11.4	11.6	2.03	4.07	.72	4.08	19.5	7.71
1958	2.95	18.7	18.0	20.3	23.7	15.9	23.1	17.7	7.33	2.23	5.34	1.74	13.0
1959	2.62	3.17	15.8	8.21	9.34	7.39	15.8	5.34	1.81	2.20	.481	.960	6.08
1960	2.63	6.58	11.0	8.34	32.4	18.6	20.6	11.0	3.15	3.56	3.34	8.58	10.7

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.95	0.63	3.00	1.11	1.42	1.29	1.78	0.71	0.77	1.09	0.22	0.16	13.15
1952	.16	.45	3.50	3.58	4.56	4.56	2.92	1.73	.26	.52	1.02	.74	24.00
1953	.21	2.06	1.15	2.10	1.99	2.65	1.96	.73	.34	.10	.47	.24	14.00
1954	.21	.33	.88	2.32	.76	2.13	1.71	1.41	.21	.08	.15	.03	10.22
1955	.30	.36	.91	.44	1.25	1.84	2.38	.50	.64	.58	2.73	.86	12.79
1956	1.23	.68	.53	.57	1.91	1.43	1.66	.92	.46	.39	.18	.14	10.10
1957	.27	.68	71.0	9.7	2.18	1.43	1.41	.25	.49	.09	.53	.23	11.37
1958	.37	2.26	2.26	2.55	6.89	1.99	2.80	2.21	.89	.28	.67	.21	19.18
1959	.33	.38	1.98	1.03	1.06	.93	1.92	.67	.22	.28	.06	.12	8.98
1960	.33	.80	1.38	1.05	3.80	2.33	2.50	1.38	.38	.45	.42	1.04	15.86

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	10.3	15.24
1951	1203, 1703	440	July 16, 1951	0.9	8.90	0.967	13.13	8.58	12.66
1952	1233, 1703	1,160	Sept. 1, 1952	.4	16.2	1.76	24.00	15.8	23.31
1953	1273, 1703	770	Nov. 20, 1952	.6	9.49	1.03	14.00	8.13	12.00
1954	1383, 1703	890	Mar. 1, 1954	.2	6.92	.752	10.22	7.02	10.37
1955	1383, 1703	1,320	Apr. 14, 1955	.2	8.67	.942	12.79	9.26	13.63
1956	1433, 1703	725	Oct. 14, 1955	.3	6.82	.741	10.10	6.31	9.34
1957	1503, 1703	1,000	Sept. 17, 1957	.2	7.71	.858	11.37	9.88	14.08
1958	(a)	800	Jan. 25, 1958	1.2	13.0	1.41	19.18	11.5	16.98
1959	(a)	800	Dec. 29, 1958	.2	6.08	.661	8.98	5.95	8.98
1960	(a)	890	Feb. 18, 1960	.6	10.7	1.16	15.86	-	-

510. North Meherrin River near Lunenburg, Va.

Location (revised).--Lat 36°59'50", long 78°21'00", on right bank at downstream side of bridge on State Highway 40, 0.5 mile downstream from Tusekiah Creek, 4 miles upstream from Juniper Creek, and 5 miles northwest of Lunenburg, Lunenburg County.

Drainage area.--60 sq mi, approximately.

Records available.--August 1946 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 333.7 ft (corrected) above mean sea level, levels by Corps of Engineers. Prior to July 5, 1951, wire-weight gage at same site and datum.

Average discharge.--14 years (1946-60), 49.5 cfs.

Extremes.--1946-60: Maximum discharge, 4,160 cfs Sept. 17, 1957 (gage height, 20.80 ft), from rating curve extended above 1,700 cfs by logarithmic plotting; no flow Sept. 5-21, Oct. 8-14, 1954.

Flood in August 1940 reached a stage of 48 ft, from information by local resident.

Remarks.--Records of chemical analyses for the period October 1951 to September 1952 are published in report of the Geological Survey.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	23.6	21.7	66.7	36.9	63.1	62.6	77.1	21.1	21.1	24.1	7.96	4.00	35.7
1952	4.53	31.4	101	105.9	74.0	168	125	28.6	12.8	9.67	21.3	37.0	59.7
1953	6.75	80.6	43.1	95.9	87.0	110	59.0	28.7	12.0	3.98	10.4		44.9
1954	4.03	5.64	23.3	91.7	34.7	67.8	97.1	53.1	8.17	3.74	3.46	.16	32.8
1955	10.9	7.73	29.7	12.7	59.3	83.1	106	18.9	18.9	26.6	138	51.5	46.8
1956	174.3	31.3	22.1	22.0	99.9	71.6	83.9	36.3	18.9	17.1	5.67	6.82	40.6
1957	10.8	26.7	23.9	43.1	126	69.8	77.2	12.1	27.5	2.72	15.8	106	44.3
1958	11.8	109	118	110	126	103	135	89.6	37.8	11.1	64.4	8.27	76.6
1959	24.0	17.8	89.5	50.6	49.4	37.5	96.4	32.4	8.09	51.6	3.75	8.10	37.4
1960	11.3	43.4	55.3	47.6	171	104	107	75.9	13.5	10.7	40.4	52.9	60.6

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.45	0.40	1.28	0.71	1.09	1.20	1.43	0.41	0.39	0.46	0.15	0.07	8.04
1952	.09	.58	1.94	2.02	1.33	3.19	2.32	.55	.24	.19	.41	.69	13.55
1953	.13	1.50	.83	1.84	1.51	2.11	1.10	.55	.22	.08	.20	.08	10.15
1954	.08	.10	.45	1.76	.60	1.30	1.81	1.02	.15	.07	.07	.003	7.41
1955	.21	.14	.57	.24	1.03	1.59	1.98	.36	.35	.51	2.65	.96	10.59
1956	1.43	.58	.42	.42	1.79	1.37	1.56	.70	.35	.33	.11	.13	9.19
1957	.21	.50	.46	.83	2.19	1.34	1.44	.23	.51	.05	.30	1.98	10.04
1958	.23	2.03	2.27	2.11	2.19	1.98	2.51	1.72	.70	.21	1.23	.15	17.33
1959	.46	.33	1.72	.97	.86	.72	1.80	.62	.15	.61	.07	.15	8.46
1960	.22	.81	1.07	.91	3.07	1.99	1.99	1.45	.25	.21	.78	.98	13.73

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	42.0	9.49
1951	1203	808	July 16, 1951	1.8	35.7	0.595	8.04	37.8	8.52
1952	1233	3,000	Apr. 27, 1952	1.8	59.7	.995	13.55	59.0	13.40
1953	1273	2,790	Nov. 20, 1952	1.3	44.9	.748	10.15	36.8	8.32
1954	1333	2,500	Apr. 16, 1954	0	32.8	.547	7.41	34.1	7.70
1955	1383	3,800	Apr. 14, 1955	0	46.8	.780	10.59	53.5	12.10
1956	1433	2,610	Oct. 14, 1955	1.2	40.6	.677	9.19	35.0	7.93
1957	1503	4,160	Sept. 17, 1957	2	44.3	.758	10.04	59.1	13.40
1958	(a)	2,560	Jan. 25, 1958	5.2	76.6	1.28	17.33	67.8	15.31
1959	(a)	3,090	Dec. 29, 1958	1.7	37.4	.623	8.46	35.5	8.05
1960	(a)	3,030	Feb. 18, 1960	2.6	60.6	1.01	13.73	-	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

CHOWAN RIVER BASIN

515. Meherrin River near Lawrenceville, Va.

Location.--Lat 36°43'00", long 77°49'55", on right bank 50 ft upstream from Gholson Bridge, 0.6 mile upstream from Allen Creek, and 3 miles southeast of Lawrenceville, Brunswick County.

Drainage area.--553 sq mi.

Records available.--October 1928 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 136.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 17, 1931, chain gage at same site and datum.

Average discharge.--32 years (1928-60), 502 cfs.

Extremes.--1928-60: Maximum discharge, 38,000 cfs Aug. 17, 1940 (gage height, 42.0 ft, from floodmark), from rating curve extended above 13,000 cfs on basis of velocity-area studies and records for Nottoway River near Stony Creek; minimum, 4.2 cfs Oct. 7, 8, 1954; minimum gage height, 0.72 ft Sept. 23, 24, 1932.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	294	323	879	360	529	697	702	278	200	218	117	70.1	388
1952	69.5	272	812	1,222	798	1,417	1,146	535	195	129	262	241	592
1953	107	786	355	978	914	963	706	425	227	97.2	70.5	34.7	469
1954	45.5	70.8	235	800	347	692	570	408	116	48.5	38.9	9.70	282
1955	58.1	64.0	215	132	491	623	658	226	189	271	1,109	310	362
1956	935	299	245	219	932	752	764	326	328	†508	157	128	465
1957	325	320	426	492	1,568	926	721	223	266	85.6	89.6	357	473
1958	132	719	1,315	1,022	1,003	1,127	1,405	1,571	437	257	494	123	800
1959	215	182	777	604	555	419	1,015	258	96.5	416	117	126	398
1960	437	1,047	649	621	1,811	1,093	1,115	658	183	130	265	310	688

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.61	0.65	1.83	0.75	1.00	1.45	1.42	0.58	0.40	0.45	0.24	0.14	9.52
1952	.15	.55	1.70	2.55	1.55	2.95	2.31	1.11	.39	.27	.55	.49	14.57
1953	.22	1.58	.74	2.04	1.72	2.01	1.43	.89	.46	.20	.15	.07	11.51
1954	.09	.14	.49	1.67	.65	1.44	1.15	.85	.23	.10	.08	.02	6.91
1955	.12	.13	.45	.28	.92	1.30	1.33	.47	.38	.56	2.32	.63	8.89
1956	1.95	.60	.51	.46	†1.82	1.57	1.54	.68	.66	1.06	.33	.26	11.44
1957	.68	.65	.89	1.03	2.96	1.92	1.45	.46	.54	.14	.19	.72	11.63
1958	.28	1.45	2.74	2.13	1.88	2.35	2.83	3.27	.88	.54	1.03	.25	19.63
1959	.45	.37	1.62	1.26	1.04	.87	2.05	.54	.19	.87	.24	.25	9.75
1960	.91	2.11	1.35	1.29	3.53	2.28	2.25	1.37	.37	.27	.55	.63	16.91

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	482	11.81
1951	1203	3,800	Mar. 21, 1951	52	388	0.702	9.52	359	8.83
1952	1233	6,800	Dec. 23, 1951	39	592	1.07	14.57	598	14.71
1953	1273	7,930	Nov. 22, 1952	21	469	.848	11.51	394	9.69
1954	1333	4,350	Mar. 2, 1954	5.8	282	.510	6.91	281	6.89
1955	1383	10,600	Aug. 20, 1955	4.2	362	.655	8.89	458	11.25
1956	1433	5,560	Oct. 2, 1955	59	465	.841	11.44	430	10.60
1957	1503	6,060	Feb. 2, 1957	18	473	.855	11.63	565	13.88
1958	1553	9,890	May 8, 1958	90	800	1.45	19.63	717	17.60
1959	1623	8,660	Dec. 21, 1958	49	398	.720	9.75	477	11.68
1960	1703	8,030	Nov. 26, 1959	67	688	1.24	16.91	-	-

520. Meherrin River at Emporia, Va.

Location.--Lat 36°41'20", long 77°32'20", on left bank at downstream side of bridge on U.S. Highway 301, in Emporia, Greensville County.

Drainage area.--749 sq mi.

Records available.--January 1951 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 68 ft (by barometer).

Average discharge.--9 years (1951-60), 680 cfs.

Extremes.--1951-60: Maximum discharge, 12,600 cfs Aug. 21, 1955 (gage height, 22.80 ft), minimum, 5 cfs Nov. 11, 1954 (gage height, 1.00 ft).
Flood in August 1940 reached a stage of 30.0 ft, from floodmarks (discharge, about 40,000 cfs, from rating curve extended above 11,000 cfs by logarithmic plotting on basis of record for station near Lawrenceville).

Remarks.--Low and medium flow regulated by powerplant 0.8 mile above station.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	754	1,018	995	387	302	335	185	97.8	-
1952	68.3	412	1,195	1,906	1,196	1,917	1,710	642	247	153	294	486	852
1953	147	1,242	489	1,328	1,261	1,239	967	585	279	147	60.7	37.4	644
1954	59.1	90.7	329	1,149	537	954	766	768	214	62.9	63.2	18.7	418
1955	42.8	60.0	242	160	564	778	782	259	208	286	1,536	414	444
1956	1,257	391	342	367	1,318	1,070	977	449	482	664	225	142	638
1957	524	506	679	677	2,202	1,306	1,003	350	296	82.9	104	370	664
1958	167	796	1,704	1,283	1,160	1,564	1,689	2,244	539	344	584	160	1,021
1959	275	245	854	957	741	553	1,293	346	141	552	169	183	523
1960	432	1,376	880	831	2,422	1,447	1,467	875	290	250	371	435	915

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	1.05	1.57	1.48	0.60	0.45	0.52	0.28	0.15	-
1952	0.10	0.61	1.84	2.93	1.73	2.95	2.54	.99	.37	.24	.45	.72	15.47
1953	.23	1.85	.75	2.04	1.75	1.90	1.44	.90	.42	.23	.09	.06	11.66
1954	.09	.14	.51	1.76	.75	1.46	1.14	1.19	.32	.10	.10	.03	7.59
1955	.07	.09	.37	.25	.78	1.20	1.16	.40	.31	.44	2.36	.62	8.05
1956	1.94	.58	.53	.56	1.90	1.65	1.45	.69	.72	1.02	.35	.21	11.60
1957	.81	.75	1.05	1.04	3.06	2.01	1.50	.54	.44	.13	.16	.55	12.04
1958	.26	1.18	2.63	1.97	1.61	2.41	2.52	3.46	.80	.53	.90	.24	18.51
1959	.42	.36	1.31	1.44	1.03	.85	1.93	.53	.21	.85	.26	.27	9.46
1960	.67	2.05	1.35	1.28	3.48	2.22	2.19	1.35	.43	.39	.57	.65	16.63

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1233	a5,100	Mar. 21, 1951	-	-	-	-	-	-
1952	1233	9,410	Dec. 23, 1952	32	852	1.14	15.47	867	15.75
1953	1273	11,200	Nov. 23, 1952	15	644	.860	11.66	528	9.57
1954	1333	5,860	May 21, 1954	12	418	.558	7.59	407	7.38
1955	1393	12,600	Aug. 21, 1955	8	444	.593	8.05	583	10.57
1956	1433	7,520	Oct. 3, 1955	24	638	.852	11.60	614	11.16
1957	1503	7,580	Feb. 3, 1957	23	664	.887	12.04	744	13.50
1958	(b)	12,100	May 8, 1958	25	1,021	1.36	18.51	913	16.53
1959	(b)	9,400	Dec. 31, 1958	20	523	.696	9.46	631	11.44
1960	(b)	8,710	Nov. 27, 1959	27	915	1.22	16.63	-	-

a Maximum during period January to September.

b Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

525. Fontaine Creek near Brink, Va.

Location.--Lat 36°36'55", long 77°42'00", on left bank 10 ft downstream from bridge on State Highway 603, 0.3 mile downstream from Quarrel Creek, 2.7 miles west of Brink, Greenville County, and 10 miles southwest of Emporia.

Drainage area.--68.6 sq mi.

Records available.--October 1953 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 150 ft (from topographic map).

Average discharge.--7 years (1953-60), 64.4 cfs.

Extremes.--1953-60: Maximum discharge, 2,660 cfs May 7, 1958 (gage height, 18.18 ft); no flow at times.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	0.19	3.39	39.0	165	75.0	89.8	119	121	15.6	2.51	1.98	0.20	52.7
1955	0	0	5.45	8.43	41.3	73.8	70.1	19.1	24.1	38.7	118	60.9	58.3
1956	96.3	29.0	35.9	39.5	132	128	99.3	47.9	80.9	21.0	49.3	10.6	63.9
1957	118	71.5	157	87.8	311	136	70.8	15.5	7.48	.83	.27	3.14	80.1
1958	2.96	30.2	152	110	110	154	154	250	22.8	17.4	69.2	8.66	90.4
1959	12.1	16.8	102	68.4	81.6	65.0	136	20.0	4.75	18.1	5.11	5.44	44.2
1960	29.7	71.0	69.8	76.5	260	152	118	43.4	9.46	41.2	60.3	53.3	81.3

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	0.003	0.05	0.66	2.78	1.14	1.51	1.93	2.03	0.25	0.04	0.03	0.003	10.43
1955	0	0	.09	.14	.63	1.24	1.14	.32	.39	.65	1.98	.99	7.57
1956	1.61	.47	.60	.66	2.07	2.16	1.62	.80	1.32	.35	.83	.17	12.66
1957	1.98	1.16	2.64	1.48	4.72	2.28	1.15	.26	.12	.014	.004	.05	15.96
1958	.05	.49	2.56	1.84	1.67	2.58	2.50	4.20	.37	.29	1.16	.14	17.85
1959	.20	.27	1.72	1.15	1.24	1.06	2.21	.34	.08	.30	.09	.09	8.75
1960	.50	1.15	1.18	1.29	4.09	2.56	1.92	.73	.15	.69	1.01	.87	16.14

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-
1954	1333	1,320	Apr. 27, 1954	0	52.7	0.768	10.43	49.6	9.80
1955	1383	1,620	Aug. 18, 1955	0	38.3	.558	7.57	51.5	10.16
1956	1433	1,040	Oct. 2, 1955	1.3	63.9	.951	12.66	79.4	15.76
1957	1503	1,940	Feb. 1, 1957	0	80.1	1.17	15.86	66.6	13.18
1958	(a)	2,660	May 7, 1958	1.4	90.4	1.32	17.85	85.8	16.94
1959	(a)	1,590	Dec. 29, 1958	.03	44.2	.644	8.75	47.4	9.39
1960	(a)	980	July 30, 1960	1.1	81.3	1.19	16.14	-	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

530. Fontaine Creek near Emporia, Va.

Location.--Lat 36°38'10", long 77°35'10", near center of span on highway bridge, 4.4 miles southeast of Emporia, Greensville County, and 7.1 miles upstream from Cattail Creek.

Drainage area.--96 sq mi, approximately.

Records available.--October 1943 to September 1953. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Chain gage and since May 29, 1951, crest-stage gage. Altitude of gage is 98 ft (by barometer).

Average discharge.--10 years (1943-53), 99.2 cfs.

Extremes.--1943-53: Maximum discharge observed, 3,500 cfs July 19, 1945 (gage height, 10.58 ft); minimum daily, 0.1 cfs Sept. 17-26, 1953.

Remarks.--Occasional regulation at low flow by mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	55.4	37.1	55.1	53.2	72.2	161	137	23.0	26.2	12.5	15.3	1.82	54.1
1952	3.60	25.8	77.2	192	221	332	244	139	23.4	24.2	23.7	9.50	109
1953	4.35	138	48.7	149	374	350	162	65.7	12.4	3.78	1.32	.36	107

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.67	0.43	0.66	0.64	0.78	1.94	1.60	0.28	0.30	0.15	0.18	0.02	7.65
1952	.04	.30	.95	2.51	2.48	3.99	2.83	1.67	.27	.29	.28	.11	15.50
1953	.05	1.61	.58	1.79	4.06	4.21	1.89	.79	.14	.04	.02	.004	15.18

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1950	-	-	-	-	-	-	-	79.2	11.20	-	-
1951	1203	520	Apr. 5, 1951	0.4	54.1	0.564	7.65	50.7	7.16	-	-
1952	1233	2,010	Apr. 27, 1952	.5	109	1.14	15.50	116	16.47	-	-
1953	1273	1,080	Mar. 26, 1953	.1	107	1.11	15.18	-	-	-	-

532. Potecasi Creek near Union, N. C.

Location.--Lat 36°22', long 77°02', on downstream side of county highway bridge, 2 $\frac{1}{2}$ miles north of Union, Hertford County, 3 miles downstream from Cutawhiskie Swamp, and 3 $\frac{1}{2}$ miles upstream from Bells Branch.

Drainage area.--191 sq mi.

Records available.--Occasional low-flow measurements 1953-57. March 1958 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is about mean sea level (by barometer). Prior to Dec. 1, 1958, wire-weight gage at same site and datum.

Extremes.--1958-60: Maximum discharge, 4,050 cfs May 10, 1958 (gage height, 19.12 ft); minimum, 0.2 cfs July 1, 1959.

Flood in 1929 reached a stage of 19.1 ft (discharge, 4,050 cfs), and flood in August 1940 reached a stage of 24.1 ft (discharge, 7,000 cfs from rating curve extended above 4,000 cfs) from information furnished by North Carolina State Highway Commission.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	468	1,010	112	17.8	171	47.0	-
1959	28.3	55.7	109	381	371	275	763	39.6	25.6	73.6	53.7	120	189
1960	1,108	246	377	344	1,135	470	227	36.5	14.2	193	499	809	453

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	2.73	6.10	0.65	0.11	1.03	0.27	-
1959	0.17	0.33	0.66	2.30	2.02	1.66	4.46	.24	.15	.44	.32	.70	13.45
1960	6.69	1.44	2.28	2.08	6.41	2.84	1.33	.22	.08	1.16	3.01	4.73	32.27

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1958	1553	4,050	May 10, 1958	a1.0	-	-	-	-	-	-	-
1959	1623	1,360	Apr. 16, 1959	.5	189	0.990	13.45	319	22.70	-	-
1960	1703	4,000	Sept. 14, 1960	1.2	453	2.37	32.27	-	-	-	-

a Maximum during period Mar. 12 to Sept. 30.

b Minimum day during period Mar. 12 to Sept. 30.

535. Ahoskie Creek at Ahoskie, N. C.

Location.--Lat 36°16'50", long 77°00'00", on right bank 10 ft downstream from bridge on State Highway 350, half a mile upstream from Atlantic Coast Line Railroad bridge, and three-quarters of a mile southwest of Ahoskie, Hertford County.

Drainage area.--64.3 sq mi.

Records available.--January 1950 to September 1960.

Average discharge.--10 years (1950-60), 69.0 cfs.

Gage.--Water-stage recorder. Altitude of gage is 22 ft (by barometer). Prior to May 24, 1951, staff gage at same site and datum.

Extremes.--1950-60: Maximum discharge, 2,560 cfs Sept. 14, 1960 (gage height, 10.11 ft); no flow at times during most years.

Flood in August 1940 reached a stage of 11.1 ft, from floodmark, witnessed by local resident (discharge not determined).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.73	3.28	7.55	14.5	19.8	55.1	45.7	3.68	20.5	32.6	1.76	1.67	17.4
1952	1.30	39.3	52.6	158	238	306	40.9	25.5	.41	.56	63.2	1.05	77.0
1953	.11	9.02	16.4	54.2	179	102	55.8	16.1	.60	5.19	35.3	1.35	38.7
1954	.48	2.08	50.6	303	66.3	83.6	88.1	77.7	2.78	.02	.51	.10	56.6
1955	.02	.400	5.00	11.9	34.1	80.3	12.5	2.22	5.52	4.65	122	370	53.8
1956	14.6	22.4	23.9	39.6	189	178	130	74.7	2.23	1.70	9.23	5.66	57.0
1957	81.0	145	56.1	56.2	290	211	49.8	.85	6.97	.67	1.15	1.07	73.5
1958	20.1	68.1	212	204	136	199	153	254	4.96	3.88	84.6	11.4	113
1959	17.9	12.5	41.6	115	126	92.5	195	10.7	.95	72.7	81.1	44.7	67.1
1960	305	55.7	131	131	325	121	47.3	18.5	3.86	70.8	130	298	136

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.05	0.06	0.14	0.26	0.32	0.99	0.79	0.07	0.36	0.59	0.03	0.03	3.69
1952	.02	.68	.94	2.83	4.00	5.49	.71	.46	.007	.01	1.13	.02	16.30
1953	.002	.16	.29	.97	2.90	1.83	.97	.29	.01	.09	.63	.02	8.16
1954	.009	.04	.91	5.43	1.07	1.50	1.53	1.39	.05	.0003	.009	.002	11.94
1955	.0004	.007	.09	.21	.55	1.44	.22	.04	.10	.08	2.19	6.43	11.36
1956	.26	.39	.43	.71	3.16	3.19	2.25	1.34	.04	.03	.17	.10	12.07
1957	1.45	2.52	1.01	1.01	4.69	3.78	.86	.02	.12	1.01	.02	.02	15.51
1958	.36	1.18	3.80	3.66	2.20	3.57	2.66	4.56	.09	.07	1.52	.20	23.87
1959	.32	.22	.75	2.05	2.04	1.66	3.39	.19	.02	1.30	1.45	.79	14.17
1960	5.46	.97	2.34	2.34	5.45	2.16	.82	.33	.07	1.27	2.33	5.18	28.72

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	37.7	7.96
1951	1203	277	June 30, 1951	0	17.4	0.271	3.69	24.0	5.08
1952	1233	904	Feb. 29, 1952	0	77.0	1.21	16.30	71.4	15.11
1953	1273	356	Feb. 17, 1953	0	39.7	.602	8.16	41.1	8.67
1954	1333	1,100	Jan. 24, 1954	0	58.6	.880	11.94	52.5	11.08
1955	1383	1,420	Sept. 22, 1955	0	53.8	.837	11.36	58.4	12.34
1956	1433	731	Mar. 19, 1956	.2	57.0	.886	12.07	75.4	15.97
1957	1503	798	Feb. 2-3, 1957	0	73.5	1.14	15.51	75.2	15.87
1958	1553	1,190	May 8, 1958	.1	113	1.76	23.87	93.8	19.82
1959	1623	635	Aug. 1-2, 1959	.2	67.1	1.04	14.17	103	21.65
1960	1703	2,560	Sept. 14, 1960	.3	136	2.12	28.72	-	-

545. Roanoke River at Lafayette, Va.

Location.--Lat 37°14'10", long 80°12'30", on right bank at Lafayette, Montgomery County, 0.4 mile downstream from confluence of North and South Forks and 1.1 miles upstream from Cove Hollow.

Drainage area.--257 sq mi.

Records available.--September 1943 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 1,174.47 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 30, 1949, staff gage at same site and datum.

Average discharge.--17 years (1943-60), 251 cfs.

Extremes.--1943-60: Maximum discharge, 15,600 cfs Sept. 30, 1959 (gage height, 11.56 ft); minimum daily, 10 cfs Jan. 14, 15, 18, 19, 1959.

Flood in August 1940 reached a stage of 12.2 ft from information by local residents (discharge, 19,000 cfs, from rating curve extended above 12,000 cfs by logarithmic plotting).

Remarks.--Records of chemical analyses for the period October 1950 to September 1952 and water temperatures for the period October 1950 to September 1951, are published in reports of the Geological Survey.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	117	112	385	139	351	531	785	208	245	140	85.7	62.9	262
1952	49.3	85.9	187	425	365	394	358	283	110	74.7	150	232	225
1953	63.6	115	200	349	410	608	274	313	111	63.7	51.6	41.8	216
1954	36.7	44.1	77.6	238	144	272	160	170	84.9	59.3	43.5	29.4	113
1955	154	107	218	150	407	925	401	164	141	112	185	75.4	253
1956	55.8	67.2	70.0	62.8	255	224	431	140	84.0	67.2	38.3	161.9	129
1957	200	205	175	417	869	373	639	159	138	71.0	49.2	132	281
1958	155	279	318	255	351	469	586	598	133	136	98.3	55.9	286
1959	54.3	59.3	212	159	85.4	156	498	175	98.2	69.3	68.0	264	158
1960	417	236	385	275	717	760	657	310	120	69.8	65.9	89.8	359

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.52	0.49	1.73	0.62	1.43	2.39	3.40	0.93	1.06	0.63	0.38	0.27	13.85
1952	.22	.36	.84	1.90	1.52	1.76	1.55	1.27	.48	.34	.67	1.01	11.92
1953	.28	.50	.90	1.57	1.67	2.73	1.19	1.41	.48	.29	.23	.18	11.43
1954	.16	.19	.35	1.07	.58	1.22	.70	.76	.37	.27	.19	.13	5.99
1955	.69	.46	.98	.67	1.64	4.15	1.74	.74	.61	.50	.83	.33	13.34
1956	.25	.29	.31	.28	1.07	1.01	1.87	.63	.36	.30	.17	.27	6.81
1957	.90	.89	.79	1.87	3.52	1.67	2.78	.71	.60	.32	.22	.57	14.84
1958	.70	1.22	1.43	1.14	1.43	2.10	2.54	2.69	.58	.61	.44	.24	15.12
1959	.24	.26	.95	.71	.34	.70	2.16	.79	.43	.29	.31	1.15	8.33
1960	1.87	1.02	1.64	1.23	3.01	3.41	2.86	1.40	.52	.31	.30	.39	17.96

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	293	15.47
1951	1203	8,800	Dec. 7, 1950	49	262	1.02	13.85	237	12.53
1952	1233	6,430	Sept. 1, 1952	40	225	.875	11.92	230	12.18
1953	1273	6,260	Mar. 24, 1953	36	216	.840	11.43	197	10.45
1954	1333	3,250	Mar. 1, 1954	24	113	.440	5.99	140	7.42
1955	1383	6,090	Oct. 15, 1954	33	253	.984	13.34	229	12.06
1956	1433	4,200	Apr. 16, 1956	28	129	.502	6.81	161	8.54
1957	1503	8,000	Jan. 29, 1957	30	281	1.09	14.84	295	15.61
1958	(a)	4,200	July 13, 1958	47	286	1.11	15.12	250	13.22
1959	(a)	15,600	Sept. 30, 1959	10	158	.615	8.33	216	11.41
1960	(a)	4,110	Feb. 11, 1960	50	339	1.32	17.96	-	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

ROANOKE RIVER BASIN

550. Roanoke River at Roanoke, Va.

Location.--Lat 37°15'30", long 79°56'20", on left bank 50 ft downstream from Walnut Street Bridge in Roanoke, Roanoke County, 3.2 miles upstream from Tinker Creek, and at mile 360.6.

Drainage area.--388 sq mi.

Records available.--February 1899 to September 1960. Monthly discharge only for some periods, published in WSP 1303. Records for July 1896 to January 1899 published in WSP 11, 15, and 27, and 20th Annual Report, Part IV, have been found to be unreliable, due to doubtful gage-height record, and should not be used.

Gage.--Water-stage recorder. Datum of gage is 906.84 ft above mean sea level (levels by Corps of Engineers). Prior to June 7, 1937, wire or chain gage on downstream side of highway bridge 50 ft upstream at same datum.

Average discharge.--61 years (1899-60), 383 cfs.

Extremes.--1899-1906: Maximum discharge, 26,400 cfs Aug. 14, 1940 (gage height, 18.25 ft), from rating curve extended above 15,000 cfs by logarithmic plotting on basis of slope-area measurement and records for other stations in Roanoke River basin; practically no flow Dec. 23, 1909, when flow was retarded by freezing (gage height, 0.0 ft); minimum daily, 27 cfs Feb. 20, 1934.

Remarks.--Records of chemical analyses for the period November 1950 to September 1951 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1891	214	158	642	222	507	803	1,117	283	407	184	123	91.6	395
1892	82.6	126	268	624	616	607	597	482	169	119	225	354	355
1893	101	151	299	481	603	938	396	460	178	95.6	71.5	65.9	319
1894	58.9	62.4	117	339	226	500	242	254	118	83.4	60.9	44.2	176
1895	254	168	378	234	585	1,350	615	245	194	150	240	104	376
1896	73.7	89.2	61.0	68.9	356	310	633	214	98.0	73.2	46.3	92.0	176
1897	405	349	269	558	1,381	587	955	236	277	113	63.9	228	444
1898	231	377	473	454	545	776	935	1,126	205	219	171	80.2	466
1899	80.0	86.2	284	276	178	258	698	225	199	105	114	304	233
1890	650	329	459	364	1,180	1,099	886	460	182	98.8	95.1	125	492

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1891	0.64	0.45	1.90	0.66	1.36	2.39	3.21	0.84	1.17	0.55	0.37	0.26	13.80
1892	.25	.36	.80	1.86	1.72	1.80	1.72	1.43	.49	.35	.67	1.02	12.47
1893	.30	.43	.89	1.43	1.61	2.79	1.14	1.37	.51	.28	.21	.19	11.15
1894	.18	.18	.35	1.01	.61	1.49	.70	.76	.34	.25	.18	.13	6.18
1895	.76	.48	1.12	.70	1.57	4.01	1.77	.73	.56	.45	.71	.30	13.16
1896	.22	.26	.24	.21	.99	.92	1.82	.64	.28	.22	.14	.26	6.20
1897	1.20	1.00	.80	1.66	3.71	1.74	2.74	.70	.80	.34	.19	.66	15.54
1898	.69	1.08	1.41	1.35	1.46	2.31	2.69	3.34	.59	.65	.51	.23	16.31
1899	.24	.25	.84	.82	.48	.77	2.01	.67	.57	.31	.34	.88	8.18
1890	1.93	.95	1.36	1.08	3.28	3.27	2.55	1.37	.52	.29	.28	.36	17.24

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1890	-	-	-	-	-	-	-	427	14.93
1891	1203	10,600	Dec. 8, 1950	79	395	1.02	13.80	349	12.22
1892	1233	6,570	Sept. 1, 1952	64	355	.915	12.47	361	12.68
1893	1273	7,220	Mar. 24, 1953	51	319	.822	11.15	293	10.24
1894	1333	4,770	Mar. 1, 1954	37	176	.454	6.18	223	7.83
1895	1383	5,960	Oct. 15, 1954	40	376	.969	13.16	329	11.52
1896	1433	4,270	Apr. 16, 1956	38	176	.454	6.20	242	8.48
1897	1503	8,900	Jan. 29, 1957	46	444	1.14	15.54	449	15.72
1898	1553	5,760	May. 6, 1958	70	466	1.20	16.31	413	14.46
1899	1623	14,900	Sept. 30, 1959	56	233	.601	8.18	317	11.09
1890	1703	5,180	Feb. 11, 1960	68	492	1.27	17.24	-	-

551. Tinker Creek near Daleville, Va.

Location.--Lat 37°25'03", long 79°56'08", on left bank 300 ft downstream from footbridge, 1,100 ft below Norfolk and Western Railway bridge, a quarter of a mile downstream from unnamed tributary, half a mile south of Glebe Mills, and 1.3 miles northwest of Daleville, Botetourt County.

Drainage area.--11.5 sq mi.

Records available.--April 1956 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 1,220 ft (from topographic map).

Extremes.--1956-60: Maximum discharge, 670 cfs (revised) Sept. 1, 1960 (gage height, 5.52 ft), from rating curve extended above 100 cfs on basis of slope-area measurement at gage height 8.52 ft; minimum, 0.9 cfs July 7, 1959 (gage height, 1.14 ft).
Flood in 1940 reached a stage of 9.0 ft, from information by local resident (discharge, 2,520 cfs, from rating curve extended as noted above).

Remarks.--Some pumpage for irrigation occurred during low flow.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1956	-	-	-	-	-	-	-	4.89	4.25	4.01	3.05	6.13	-
1957	13.5	12.9	10.9	14.7	33.7	21.5	24.7	8.79	6.14	3.10	2.73	8.97	13.3
1958	7.10	11.3	14.6	19.8	18.4	28.9	28.6	33.8	11.4	8.75	5.94	4.27	16.1
1959	4.95	2.57	4.24	8.24	5.91	8.80	17.7	7.76	4.53	3.27	3.41	5.75	6.42
1960	9.43	8.35	10.6	10.6	29.6	32.5	29.6	14.5	6.24	3.33	3.92	6.41	13.7

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1956	-	-	-	-	-	-	-	0.49	0.41	0.40	0.31	0.59	-
1957	1.35	1.25	1.09	1.48	3.05	2.16	2.40	.88	.60	.31	.27	.87	15.71
1958	.71	1.10	1.46	1.98	1.67	2.89	2.78	3.39	1.11	.88	.60	.41	18.98
1959	.50	.25	.42	.83	.53	.88	1.71	.78	.44	.33	.34	.56	7.57
1960	.95	.81	1.07	1.06	2.78	3.26	2.87	1.46	.61	.33	.39	.62	16.21

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1956	1503	-	-	-	-	-	-	-	-
1957	1503	245	Oct. 27, Apr. 5	2.2	13.3	1.16	15.71	12.9	15.29
1958	1553	*580	May 5, 1958	3.4	16.1	1.40	18.98	14.3	16.88
1959	1623	*520	Sept. 30, 1959	1.4	6.42	.558	7.57	7.81	9.23
1960	1703	*670	Sept. 1, 1960	2.4	13.7	1.19	16.21	-	-

* Revised.

560. Roanoke River at Niagara, Va.

Location.--Lat 37°15'18", long 79°52'18", on right bank 200 ft downstream from powerplant of Appalachian Electric Power Co. at Niagara, Roanoke County, 2 miles downstream from Tinker Creek, 2.1 miles southeast of Vinton, and at mile 355.3.

Drainage area.--511 sq mi.

Records available.--July 1926 to September 1960 (fragmentary July to September 1926).

Gage.--Water-stage recorder. Datum of gage is 820.15 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--34 years (1926-60), 522 cfs.

Extremes.--1926-60: Maximum discharge, 35,000 cfs Aug. 14, 1940 (gage height, 17.5 ft, from floodmark), from rating curve extended above 12,000 cfs by logarithmic plotting on basis of velocity-area study by Geological Survey, unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in the Roanoke River basin; minimum, 1.0 cfs Oct. 16, 20, 1956; minimum daily, 8 cfs Oct. 9, 1954.

Remarks.--Flow regulated at dam and powerplant 200 ft above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	230	189	924	512	658	1,064	1,472	417	612	260	187	149	555
1952	133	176	354	814	802	855	854	613	248	191	365	524	493
1953	175	251	392	699	820	1,296	536	578	289	175	231	269	475
1954	223	174	205	468	328	660	320	317	186	134	116	84.0	268
1955	415	232	537	336	796	1,794	815	337	278	218	363	209	527
1956	139	141	128	116	479	411	757	259	177	139	92.2	164	248
1957	519	443	358	693	1,718	792	1,237	348	396	190	138	330	587
1958	320	503	634	693	750	1,072	1,447	344	362	282	162	648	587
1959	155	153	401	406	286	406	876	342	319	201	218	475	353
1960	844	437	604	499	1,412	1,368	1,178	651	320	199	195	235	661

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.52	0.41	2.09	1.15	1.34	2.40	3.21	0.94	1.34	0.59	0.42	0.33	14.74
1952	.30	.38	.80	1.85	1.69	1.92	1.86	1.58	.54	.43	.82	1.15	13.10
1953	.39	.55	.86	1.58	1.67	2.93	1.17	1.30	.63	.39	.52	.59	12.60
1954	.50	.38	.46	1.06	.87	1.49	.70	.71	.41	.30	.26	.18	7.12
1955	.94	.51	1.21	.76	1.62	4.05	1.77	.76	.61	.49	.82	.46	14.00
1956	.31	.31	.29	.26	1.01	.93	1.65	.58	.39	.31	.21	.36	6.61
1957	1.18	.97	.81	1.57	3.50	1.79	2.70	.78	.86	.43	.31	.72	15.62
1958	.72	1.10	1.43	1.57	1.53	2.42	2.63	3.26	.75	.82	.64	.35	17.22
1959	.35	.33	.91	.92	.58	.92	1.91	.77	.70	.45	.49	1.04	9.37
1960	1.90	.95	1.36	1.13	2.98	3.13	2.57	1.47	.70	.45	.44	.51	17.59

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	573	15.24
1951	1203	14,800	Dec. 7, 1950	102	555	1.09	14.74	497	13.20
1952	1235	15,200	Sept. 1, 1952	110	493	.965	13.10	506	15.44
1953	1275	11,100	Mar. 24, 1953	92	475	.930	12.60	456	12.12
1954	1333	6,830	Mar. 1, 1954	12	268	.524	7.12	317	8.44
1955	1383	15,000	Oct. 15, 1954	8	527	1.03	14.00	461	12.25
1956	1433	5,580	Apr. 16, 1956	10	248	.485	6.61	325	8.66
1957	1503	10,800	Jan. 29, 1957	51	587	1.15	15.62	599	15.91
1958	1553	7,490	May 6, 1958	103	648	1.27	17.22	586	15.56
1959	1623	8,180	Dec. 29, 1958	79	353	.691	9.37	452	11.99
1960	1703	21,500	Oct. 1, 1959	106	661	1.29	17.59	-	-

570. Blackwater River near Union Hall, Va.

Location.--Lat 37°02'35", long 79°41'07", on left bank 100 ft upstream from highway bridge at Kemps Ford, 3 miles upstream from Gills Creek, and 3 miles north of Union Hall, Franklin County.

Drainage area.--208 sq mi.

Records available.--October 1924 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 693.13 ft above mean sea level. Prior to Nov. 22, 1929, chain gage at same site and datum.

Average discharge.--36 years (1924-60), 226 cfs.

Extremes.--1924-60: Maximum discharge, 19,700 cfs Aug. 14, 1940 (gage height, 19.52 ft), from rating curve extended above 6,500 cfs by logarithmic plotting on basis of unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in the Roanoke River basin; minimum, 13 cfs Sept. 20, 1932 (gage height, 1.42 ft).

Remarks.--Records of chemical analyses for the periods November 1950, January to September 1951, are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	180	148	407	183	333	350	488	212	345	173	116	93.9	251
1952	85.1	137	272	237	310	529	377	274	206	138	191	320	256
1953	124	148	192	318	364	564	250	130	138	92.0	55.5	44.7	206
1954	59.3	66.7	135	263	183	249	150	169	126	61.3	56.7	36.5	129
1955	185	163	175	137	214	343	333	195	220	231	312	140	221
1956	108	107	105	93.3	167	163	252	107	81.2	45.5	28.2	84.0	111
1957	232	207	161	159	462	324	565	262	233	110	67.1	320	256
1958	220	297	284	342	526	390	409	407	259	167	124	80.1	274
1959	78.4	84.3	225	195	141	178	258	135	108	101	135	255	157
1960	368	182	226	194	513	434	427	291	187	105	142	142	267

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.00	0.79	2.26	1.01	1.67	1.94	2.62	1.18	1.85	0.96	0.64	0.50	16.42
1952	.47	.74	1.51	1.31	1.61	2.93	2.02	1.52	1.10	.76	1.06	1.72	16.75
1953	.69	.79	1.06	1.76	1.82	3.12	1.34	1.05	.74	.51	.31	.24	13.43
1954	.33	.36	.75	1.45	.92	1.38	.80	.94	.68	.34	.31	.20	8.46
1955	1.02	.87	.97	.76	1.07	1.90	1.78	1.08	1.18	1.28	1.73	.75	14.39
1956	.60	.57	.58	.52	.87	.90	1.35	.59	.44	.25	.16	.45	7.28
1957	1.29	1.11	.89	.88	2.31	1.80	3.04	1.45	1.25	.61	.37	1.72	16.72
1958	1.22	1.60	1.58	1.89	1.64	2.17	2.20	2.26	1.28	.93	.69	.44	17.90
1959	.43	.45	1.24	1.08	.70	.99	1.38	.74	.58	.56	.74	1.37	10.26
1960	2.04	.98	1.25	1.08	2.66	2.41	2.29	1.62	1.00	.58	.79	.76	17.46

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	265	17.30
1951	1203	5,610	Dec. 7, 1950	80	251	1.21	16.42	231	15.09
1952	1233	5,850	Sept. 1, 1952	76	256	1.23	16.75	253	16.57
1953	1273	4,730	Mar. 24, 1953	36	206	.990	13.43	189	12.33
1954	1353	2,890	Mar. 1, 1954	26	129	.620	8.46	151	9.88
1955	1383	6,660	Aug. 18, 1955	29	221	1.06	14.39	204	13.28
1956	1433	1,520	Sept. 27, 1956	19	111	.534	7.28	135	8.82
1957	1503	4,250	Sept. 17, 1957	53	256	1.23	16.72	273	17.83
1958	1553	1,760	Feb. 27, May 7	70	274	1.32	17.90	239	15.62
1959	1623	4,810	Dec. 29, 1958	32	157	.755	10.26	190	12.41
1960	1703	6,210	Oct. 1, 1959	75	267	1.28	17.46	-	-

575. Roanoke (Staunton) River near Toshes, Va.

Location.--Lat 37°02'03", long 79°31'18", on right bank $1\frac{1}{2}$ miles downstream from Witchers Creek, 3 miles upstream from Pigg River, 5 miles northwest of Toshes, Pittsylvania County, and at mile 313.1.

Drainage area.--1,020 sq mi.

Records available.--September 1925 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 588.99 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 14, 1929, staff gage at same site and datum.

Average discharge.--35 years (1925-60) 1,009 cfs.

Extremes.--1925-60: Maximum discharge, 70,000 cfs Aug. 15, 1940 (gage height, 27.36 ft, from floodmark), from rating curve extended above 31,000 cfs by logarithmic plotting on basis of unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in the Roanoke River basin; minimum, 55 cfs Sept. 14, 1954.

Remarks.--Diurnal fluctuation at low flow caused by powerplant at Niagara. Records of chemical analyses for the period October 1950 to September 1951 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	649	570	1,759	702	1,347	1,808	2,554	893	1,343	665	415	312	1,081
1952	273	472	1,040	1,358	1,497	1,998	1,659	1,311	610	441	970	1,169	1,065
1953	403	558	762	1,444	1,603	2,475	1,058	996	564	324	235	193	882
1954	208	238	440	1,008	700	1,160	624	646	378	239	207	131	498
1955	1,089	688	931	644	1,223	2,569	1,546	728	798	685	1,013	399	1,026
1956	305	328	301	270	807	757	1,270	474	322	220	144	358	460
1957	1,082	956	698	947	2,766	1,552	2,487	856	856	404	266	1,000	1,141
1958	755	1,180	1,321	1,554	1,613	2,086	2,366	2,571	816	757	635	356	1,334
1959	331	326	914	850	579	834	1,642	628	578	461	444	652	686
1960	1,815	821	1,125	939	2,799	2,492	2,240	1,238	630	389	369	460	1,271

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.73	0.62	1.98	0.79	1.38	2.04	2.79	1.01	1.47	0.75	0.47	0.34	14.37
1952	.31	.52	1.18	1.53	1.58	2.26	1.82	1.49	.67	.50	1.10	1.28	14.24
1953	.46	.61	.86	1.64	1.64	2.80	1.16	1.13	.62	.37	.27	.21	11.77
1954	.24	.26	.50	1.14	.71	1.31	.68	.73	.41	.27	.23	.14	6.62
1955	1.23	.75	1.05	.73	1.25	2.90	1.70	.82	.87	.77	1.14	.44	13.65
1956	.34	.36	.34	.31	.85	.86	1.40	.54	.35	.25	.16	.39	6.15
1957	1.22	1.05	.79	1.07	2.82	1.75	2.72	.97	.94	.46	.30	1.09	15.18
1958	.85	1.29	1.50	1.75	1.64	2.36	2.59	2.90	.89	.86	.72	.39	17.74
1959	.37	.36	1.03	.96	.59	.94	1.80	.71	.63	.52	.50	.71	9.12
1960	2.05	.90	1.27	1.06	2.96	2.82	2.45	1.40	.69	.44	.42	.50	16.96

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,175	15.62
1951	1203	19,400	Dec. 8, 1950	250	1,081	1.06	14.37	980	13.05
1952	1233	18,400	Sept. 1, 1952	230	1,065	1.04	14.24	1,060	14.16
1953	1273	16,400	Mar. 24, 1953	157	882	.865	11.77	812	10.84
1954	1333	11,300	Mar. 1, 1954	82	498	.488	6.62	652	8.65
1955	1383	28,200	Oct. 15, 1954	69	1,026	1.01	13.65	877	11.66
1956	1433	7,120	Apr. 16, 1956	90	460	.451	6.15	611	8.17
1957	1503	15,900	Apr. 5, 1957	160	1,141	1.12	15.18	1,184	15.76
1958	1553	11,600	May 6, 1958	315	1,334	1.31	17.74	1,193	15.86
1959	1623	16,600	Dec. 29, 1958	190	686	.673	9.12	871	11.58
1960	1703	25,500	Oct. 1, 1959	260	1,271	1.25	16.96	-	-

585. Pigg River near Toshes, Va.

Location.--Lat 36°59'01", long 79°30'52", on right bank 0.5 mile downstream from Fryingspan Creek and 1.7 miles northwest of Toshes, Pittsylvania County.

Drainage area.--394 sq mi.

Records available.--August 1930 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 602.55 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--30 years (1930-60), 399 cfs.

Extremes.--1930-60: Maximum discharge, 34,300 cfs Aug. 15, 1940 (gage height, 32.5 ft, from floodmark), from rating curve extended above 11,000 cfs by logarithmic plotting on basis of slope-area measurement at gage height 25.8 ft, and records for other stations in the Roanoke River basin; minimum, 22 cfs Aug. 31, 1932 (gage height, 2.32 ft).

Remarks.--Diurnal fluctuation at low flow caused by mill on Fryingspan Creek. Records of chemical analyses for the period October 1950 to September 1951 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	327	275	557	271	523	507	806	330	508	271	184	140	390
1952	137	289	667	353	527	895	650	362	253	226	341	435	428
1953	204	277	280	477	567	710	352	278	246	151	122	85.9	311
1954	103	128	256	559	258	406	320	332	242	158	111	72.9	244
1955	642	322	349	220	416	559	508	273	337	296	641	193	397
1956	167	182	176	165	298	319	468	192	149	116	74.4	222	210
1957	436	289	253	252	621	435	719	259	363	169	126	726	384
1958	294	761	485	575	603	674	856	908	479	314	298	193	536
1959	207	214	740	451	282	391	565	300	207	248	232	393	351
1960	661	277	426	369	1,035	797	755	486	287	207	297	287	488

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.96	0.78	1.63	0.79	1.38	1.49	2.29	0.97	1.44	0.79	0.54	0.40	13.46
1952	.40	.82	1.95	1.03	1.44	2.62	1.84	1.06	.72	.66	1.00	1.23	14.77
1953	.60	.78	.82	1.40	1.50	2.08	1.00	.81	.70	.44	.36	.24	10.73
1954	.30	.36	.75	1.58	.68	1.19	.91	.97	.68	.46	.33	.21	8.42
1955	1.88	.91	1.02	.64	1.10	1.64	1.44	.80	.95	.87	1.98	.55	13.68
1956	.49	.52	.52	.48	.82	.93	1.33	.56	.42	.34	.22	.63	7.26
1957	1.28	.82	.74	.74	1.64	1.27	2.03	.76	1.03	.49	.37	2.05	13.22
1958	.86	2.21	1.42	1.68	1.59	1.97	2.36	2.65	1.36	.92	.87	.55	18.44
1959	.61	.61	2.16	1.26	.75	1.14	1.60	.88	.59	.73	.68	1.11	12.12
1960	1.93	.79	1.25	1.08	2.83	2.33	2.14	1.42	.81	.61	.87	.81	16.87

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	433	14.93
1951	1203	5,440	Feb. 7, 1951	102	390	0.990	13.46	385	13.26
1952	1233	7,700	Dec. 21, 1951	99	428	1.09	14.77	399	13.80
1953	1273	5,360	Feb. 21, 1953	71	311	.789	10.73	288	9.94
1954	1333	7,100	Jan. 22, 1954	51	244	.619	8.42	314	10.82
1955	1383	17,500	Oct. 15, 1954	57	397	1.01	13.68	330	11.40
1956	1433	3,970	Apr. 16, 1956	44	210	.533	7.26	248	8.57
1957	1503	11,500	Sept. 17, 1957	86	384	.975	13.22	432	14.87
1958	1553	6,000	Nov. 19, 1957	170	536	1.36	18.44	503	17.33
1959	1623	14,200	Dec. 29, 1958	100	351	.891	12.12	369	12.71
1960	1703	7,200	Oct. 1, 1959	150	488	1.24	16.87	-	-

595. Goose Creek near Huddleston, Va.

Location (revised).--Lat 37°10'20", long 79°31'15", on left bank a quarter of a mile upstream from Haden Bridge, three-eighths of a mile upstream from Rockcastle Creek, and 3.5 miles upstream from Huddleston, Bedford County.

Drainage area.--187 sq mi.

Records available.--March 1925 to September 1927 (gage heights only), September 1930 to September 1960. October 1927 to August 1928, July 1929 to December 1931, gage heights only at site 4 miles downstream, published in Virginia Conservation Commission, Division of Water Resources and Power, Bull. 6.

Gage.--Water-stage recorder. Datum of gage is 592.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Mar. 15, 1925, to Aug. 4, 1928, chain gage at site a quarter of a mile downstream at different datum.

Average discharge.--30 years (1930-60), 179 cfs.

Extremes.--1930-60: Maximum discharge, 20,300 cfs Oct. 19, 1937 (gage height, 25.75 ft, from floodmarks), from rating curve extended above 6,400 cfs on basis of slope-area measurement at gage height 24.1 ft; minimum, 3 cfs Aug. 31, 1932, Jan. 30, 1934.

Remarks.--Diurnal fluctuation at low flow caused by mill above station, prior to October 1954. Records of chemical analyses for the period October 1950 to September 1951 are published in report of the Geological Survey.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	109	101	254	109	278	313	406	136	285	132	89.7	65.7	189
1952	61.0	119	302	300	292	388	303	288	113	84.0	298	252	233
1953	95.5	117	131	259	263	364	179	189	105	75.3	49.0	51.0	156
1954	56.6	61.9	123	189	124	167	106	110	64.4	53.6	64.1	34.0	96.2
1955	297	291	219	130	224	334	261	122	126	98.5	181	83.6	197
1956	65.7	67.1	70.3	69.6	139	125	152	73.4	57.0	49.0	37.7	70.1	80.7
1957	151	150	134	165	348	249	418	192	155	69.0	46.4	171	186
1958	118	170	226	266	242	398	330	390	134	159	129	72.6	218
1959	70.7	78.0	142	143	114	157	260	98.2	93.1	74.8	75.6	89.9	116
1960	231	138	164	159	456	316	316	201	102	67.9	59.6	68.2	189

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.67	0.60	1.57	0.67	1.55	1.92	2.42	0.84	1.70	0.81	0.55	0.39	13.69
1952	.38	.71	1.86	1.84	1.68	2.39	1.81	1.78	.67	.52	1.83	1.51	16.98
1953	.58	.70	.81	1.60	1.47	2.25	1.07	1.16	.63	.46	.30	.30	11.53
1954	.35	.37	.76	1.16	.69	1.03	.63	.68	.38	.33	.40	.20	6.98
1955	1.83	1.74	1.35	.80	1.25	2.06	1.56	.75	.75	.61	1.12	.50	14.32
1956	.39	.40	.43	.43	.80	.77	.91	.45	.34	.30	.23	.42	5.87
1957	.93	.89	.83	1.02	1.94	1.53	2.50	1.19	.92	.42	.29	1.02	13.48
1958	.73	1.01	1.40	1.64	1.34	2.46	1.96	2.41	.80	.86	.80	.43	15.84
1959	.44	.47	.88	.88	.64	.97	1.55	.61	.56	.46	.47	.54	8.47
1960	1.45	.82	1.01	.98	2.63	1.95	1.89	1.23	.61	.42	.37	.41	13.75

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	217	15.76
1951	1203	3,740	Feb. 7, 1951	55	189	1.01	13.69	190	13.80
1952	1233	11,900	Aug. 31, 1952	51	233	1.25	16.98	221	16.12
1953	1273	3,150	Feb. 21, 1953	32	158	.834	11.33	148	10.72
1954	1333	2,550	Jan. 22, 1954	23	96.2	.514	6.98	144	10.42
1955	1383	16,000	Oct. 15, 1954	21	197	1.05	14.32	146	10.62
1956	1433	2,200	Sept. 27, 1956	23	80.7	.432	5.87	100	7.30
1957	1503	6,420	May 19, 1957	32	166	.995	13.48	192	13.97
1958	(a)	4,080	Mar. 27, 1958	62	218	1.17	15.84	199	14.49
1959	(a)	2,600	Sept. 30, 1959	32	116	.620	8.47	137	9.94
1960	(a)	2,730	Feb. 19, 1960	39	189	1.01	13.75	-	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

605. Roanoke (Staunton) River at Altavista, Va.

Location.--Lat 37°06'16", long 79°17'44", on right bank 12 ft upstream from highway bridge, a quarter of a mile south of Altavista, Campbell County, half a mile downstream from Sycamore Creek, $3\frac{1}{2}$ miles upstream from Otter River, and at mile 286.5.

Drainage area.--1,802 sq mi.

Records available.--September 1930 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 503.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Feb. 22, 1951, at site 50 ft downstream at same datum.

Average discharge.--30 years (1930-60), 1,941 cfs.

Extremes.--1930-60: Maximum discharge, 105,000 cfs Aug. 15, 1940 (gage height, 40.08 ft, from floodmark), from rating curve extended above 52,000 cfs by logarithmic plotting on basis of unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in the Roanoke River basin; minimum, 94 cfs Jan. 31, 1934 (gage height, 1.66 ft).

Remarks.--Diurnal fluctuation at low flow caused by powerplant at Niagara, 69 miles above station. Records of chemical analyses for the periods October 1950 to September 1951, October 1955 to August 1956; suspended sediment loads for the period February 1953 to September 1956; and water temperatures, are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,346	1,022	3,109	2,298	2,676	3,165	4,818	1,730	2,677	1,335	828	555	2,039
1952	499	1,169	2,734	2,652	3,091	4,260	3,369	2,625	1,248	1,028	2,029	2,920	2,299
1953	872	1,242	1,531	2,862	3,056	4,558	2,087	1,901	1,171	691	489	367	1,730
1954	425	476	1,067	2,397	1,451	2,410	1,442	1,473	915	592	485	284	1,119
1955	2,410	1,718	1,866	1,240	2,351	4,543	2,972	1,511	1,685	1,507	2,577	842	2,103
1956	589	690	612	543	1,528	1,490	2,369	849	653	539	360	828	915
1957	1,953	1,841	1,354	1,632	4,751	3,004	4,608	1,715	1,702	753	509	2,282	2,149
1958	1,532	2,736	2,643	3,024	3,093	3,851	4,458	4,825	1,754	1,400	1,243	672	2,606
1959	689	736	2,119	1,989	1,251	1,749	3,146	1,280	1,033	966	956	1,094	1,410
1960	3,581	1,515	2,164	1,889	5,338	4,441	4,352	2,473	1,213	729	822	1,024	2,451

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.86	0.63	1.99	0.83	1.55	2.03	2.98	1.11	1.66	0.85	0.53	0.34	15.36
1952	.32	.72	1.75	1.70	1.86	2.72	2.09	1.68	.77	.66	1.30	1.81	17.38
1953	.56	.77	.98	1.83	1.77	2.92	1.29	1.21	.73	.44	.31	.23	13.04
1954	.27	.29	.68	1.53	.84	1.54	.89	.94	.57	.38	.31	.18	8.42
1955	1.54	1.06	1.20	.79	1.35	2.90	1.84	.97	1.04	.96	1.65	.52	15.82
1956	.38	.43	.39	.35	.91	.95	1.46	.54	.40	.34	.23	.51	6.89
1957	1.24	1.14	.87	1.04	2.75	1.92	2.86	1.10	1.05	.48	.33	1.42	16.20
1958	1.02	1.70	1.70	1.94	1.79	2.47	2.76	3.09	1.09	.90	.80	.42	19.68
1959	.44	.46	1.36	1.27	.73	1.12	1.95	.82	.64	.62	.55	.68	10.64
1960	2.29	.94	1.38	1.21	3.19	2.84	2.69	1.58	.75	.47	.53	.63	18.50

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	2,231	16.81
1951	1203	26,000	Dec. 8, 1950	444	2,039	1.13	15.36	1,947	14.67
1952	1233	41,200	Sept. 1, 1952	370	2,299	1.28	17.38	2,235	16.90
1953	1273	26,300	Mar. 24, 1953	301	1,730	.980	13.04	1,690	11.97
1954	1333	19,300	Jan. 22, 1954	170	1,119	.621	8.42	1,458	10.98
1955	1353	52,000	Oct. 16, 1954	194	2,103	1.17	15.82	1,757	13.22
1956	1433	12,000	Apr. 16, 1956	200	915	.508	6.89	1,188	8.94
1957	1503	30,100	Apr. 6, 1957	347	2,149	1.19	16.20	2,302	17.37
1958	1553	22,000	May 6, 1958	585	2,608	1.45	19.68	2,320	17.52
1959	1623	31,800	Dec. 30, 1958	346	1,410	.782	10.64	1,724	12.99
1960	1703	35,600	Oct. 1, 1959	548	2,451	1.36	18.50	-	-

610. Otter River near Bedford, Va.

Location.--Lat 37°21'50", long 79°25'10", on left bank 10 ft upstream from bridge on U.S. Highway 460, 1 mile downstream from Roaring Run, 5 miles upstream from Elk Creek, 6½ miles northeast of Bedford, Bedford County, and 8 miles upstream from Little Otter River.

Drainage area.--116 sq mi.

Records available.--October 1943 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 647.16 ft above mean sea level, datum of 1929.

Average discharge.--17 years (1943-60), 133 cfs.

Extremes.--1943-60: Maximum discharge, 12,100 cfs Mar. 23, 1949 (gage height, 17.3 ft), from rating curve extended above 4,000 cfs on basis of slope-area measurements at gage heights 12.1 and 17.3 ft; minimum, 5.3 cfs Sept. 15, 1956, minimum gage height, 0.89 ft Sept. 8, 1944.

Flood in 1937 or 1939 reached a stage of 21.8 ft, from mud lines on bridge piers. Flood in August 1940 reached a stage of 12.1 ft, from floodmarks (discharge, 8,080 cfs), from rating curve extended above 4,000 cfs on basis of slope-area measurements at gage heights 12.1 and 17.3 ft.

Remarks.--Records of chemical analyses for the period October 1950 to September 1951 are published in report of the Geological Survey.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	63.9	52.4	171	85.9	198	207	303	104	197	73.3	41.5	22.9	126
1952	26.4	75.1	215	213	234	302	241	237	81.6	48.0	41.6	211	192
1953	57.9	81.2	119	224	245	323	187	191	98.2	49.4	25.1	16.1	134
1954	14.1	26.5	91.2	127	104	186	87.5	78.3	47.2	44.6	32.5	14.0	71.1
1955	130	198	178	132	201	349	297	127	133	43.9	114	48.3	162
1956	30.0	29.6	33.0	30.5	101	103	144	54.7	29.2	25.8	15.5	26.3	51.6
1957	70.6	117	93.2	132	324	223	310	99.1	66.5	29.7	16.0	81.5	129
1958	85.7	129	165	189	174	287	259	282	92.4	109	110	42.3	161
1959	31.6	36.0	69.6	97.5	76.4	112	214	73.7	108	28.5	37.1	131	84.3
1960	206	107	137	145	331	246	305	214	107	49.7	38.6	73.7	163

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.64	0.50	1.70	0.85	1.78	2.05	2.91	1.03	1.90	0.73	0.41	0.22	14.72
1952	.26	.72	2.13	2.12	2.18	3.00	2.32	2.35	.78	.48	4.14	2.03	22.51
1953	.58	.78	1.19	2.22	2.20	3.20	1.80	1.90	.94	.49	.25	.16	15.71
1954	.14	.25	.91	1.26	.93	1.84	.84	.78	.45	.44	.32	.14	8.30
1955	1.29	1.91	1.76	1.31	1.80	3.47	2.86	1.26	1.28	.44	1.13	.46	18.97
1956	.30	.28	.33	.30	.94	1.02	1.38	.54	.28	.26	.15	.25	6.03
1957	.70	1.13	.93	1.31	2.90	2.21	2.98	.98	.64	.30	.16	.78	15.02
1958	.85	1.24	1.64	1.88	1.56	2.85	2.49	2.80	.89	1.08	1.09	.41	18.78
1959	.31	.35	.69	.97	.69	1.11	2.05	.73	1.04	.28	.37	1.26	9.85
1960	2.05	1.03	1.36	1.44	3.07	2.44	2.93	2.12	1.03	.49	.38	.71	19.05

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	135	15.83
1951	1203	2,580	Feb. 7, 1951	16	126	1.09	14.72	128	14.99
1952	1233	11,100	Aug. 9, 1952	17	192	1.66	22.51	187	21.95
1953	1273	3,080	Mar. 24, 1953	9.2	134	1.16	15.71	124	14.46
1954	1333	4,240	Mar. 1, 1954	7.0	71.1	.613	8.30	102	11.96
1955	1383	8,000	Oct. 15, 1954	6.7	162	1.40	18.97	128	14.92
1956	1433	1,510	Apr. 16, 1956	5.9	51.6	.445	6.03	67.2	7.88
1957	1503	2,750	Feb. 28, 1957	7.6	129	1.11	15.02	137	15.99
1958	(a)	3,950	Mar. 27, 1958	29	161	1.59	18.78	140	16.40
1959	(a)	5,860	Sept. 30, 1959	7.3	84.3	.727	9.85	111	12.94
1960	(a)	4,780	May 27, 1960	19	163	1.41	19.05	-	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

615. Otter River near Evington, Va.

Location.--Lat 37°12'30", long 79°18'14", on right bank 10 ft upstream from highway bridge, 2 miles upstream from Flat Creek, and 2 miles southwest of Evington, Campbell County.

Drainage area.--325 sq mi.

Records available.--October 1936 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 544.02 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--24 years (1936-60), 352 cfs.

Extremes.--1936-60: Maximum discharge, 27,500 cfs Oct. 19, 1937, Aug. 19, 1939 (gage height, 23.1 ft), from rating curve extended above 7,000 cfs by logarithmic plotting on basis of unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, 33 cfs Sept. 19, 1956 (gage height, 1.02 ft).

Remarks.--Records of chemical analyses for the period October 1950 to September 1952 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	205	186	497	239	536	566	794	298	616	272	151	93.4	369
1952	93.1	247	616	575	621	785	618	569	236	241	877	586	506
1953	196	286	320	621	578	756	442	432	234	160	125	86.9	352
1954	97.0	104	321	458	240	445	229	234	154	129	101	45.0	214
1955	400	563	440	285	489	740	572	268	381	169	396	147	403
1956	110	115	115	108	282	268	365	146	98.4	114	65.4	118	158
1957	226	279	260	330	737	527	694	317	213	108	69.2	255	331
1958	226	365	429	524	470	683	635	665	254	299	286	126	414
1959	124	136	253	284	210	307	523	195	227	122	95.5	195	221
1960	474	267	351	353	804	614	644	462	241	140	123	181	386

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.73	0.64	1.76	0.85	1.72	2.01	2.72	1.06	2.12	0.96	0.54	0.32	15.43
1952	.33	.85	2.19	2.04	2.06	2.79	2.12	2.02	.81	.86	3.11	2.01	21.19
1953	.70	.98	1.14	2.20	1.85	2.69	1.52	1.53	.80	.57	.44	.30	14.72
1954	.34	.36	1.14	1.63	.77	1.58	.79	.83	.53	.46	.36	.15	8.94
1955	1.42	1.93	1.56	1.01	1.56	2.63	1.96	.95	1.30	.60	1.41	.50	16.83
1956	.39	.40	.41	.38	.94	.95	1.25	.52	.34	.40	.23	.40	6.61
1957	.80	.96	.92	1.18	2.36	1.87	2.39	1.12	.73	.38	.25	.68	13.84
1958	.80	1.25	1.52	1.86	1.51	2.42	2.18	2.36	.87	1.06	1.01	.43	17.27
1959	.44	.47	.90	.94	.67	1.09	1.79	.69	.78	.43	.34	.67	9.21
1960	1.68	.92	1.24	1.25	2.67	2.18	2.21	1.64	.83	.50	.44	.62	16.18

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	361	15.09
1951	1203	7,040	June 13, 1951	69	369	1.14	15.43	375	15.67
1952	1233	11,300	Aug. 9, 1952	72	506	1.56	21.19	494	20.64
1953	1273	4,970	Mar. 24, 1953	60	352	1.08	14.72	329	13.74
1954	1333	6,010	Mar. 1, 1954	34	214	.658	8.94	287	12.01
1955	1383	13,400	Oct. 15, 1954	35	403	1.24	16.83	314	13.12
1956	1433	3,370	Apr. 16, 1956	35	158	.486	6.61	193	8.09
1957	1503	6,250	May 19, 1957	44	351	1.02	13.84	352	14.75
1958	1553	4,890	Mar. 27, 1958	90	414	1.27	17.27	371	15.51
1959	1623	3,420	June 2, 1959	43	221	.680	9.21	269	11.24
1960	1703	6,670	Oct. 1, 1959	77	386	1.19	16.18	-	-

625. Roanoke (Staunton) River at Brookneal, Va.

Location.--Lat 37°02'28", long 78°57'02", on left bank 1,600 ft upstream from highway bridge at Brookneal, Campbell County, 3 miles upstream from Falling River, and at mile 255.9.

Drainage area.--2,420 sq mi, approximately.

Records available.--April 1923 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 351.96 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Aug. 30, 1929, chain gage at site 1,800 ft downstream at same datum. Aug. 30, 1929, to Aug. 15, 1940, water-stage recorder at site 1,800 ft downstream at same datum (destroyed by flood). Aug. 16 to Oct. 1, 1940, staff gage at site 1,800 ft downstream at same datum. Oct. 2, 1940, to Sept. 30, 1941, chain gage at site 1,600 ft downstream at same datum.

Average discharge.--37 years (1923-60), 2,464 cfs.

Extremes.--1923-60: Maximum discharge, 130,000 cfs Aug. 15, 1940 (gage height, 46.5 ft, at present site, from gage-height relation curve), from rating curve extended above 54,000 cfs by logarithmic plotting on basis of slope-area measurement by Geological Survey, unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, 191 cfs Sept. 2, 1932.

Remarks.--Small diurnal fluctuation at low flow caused by powerplant at Niagara.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,675	1,452	3,767	1,832	3,330	3,373	5,686	2,285	3,327	1,699	1,149	749	2,517
1952	681	1,502	3,704	3,321	3,931	5,298	4,185	3,290	1,625	1,399	2,780	3,594	2,940
1953	1,133	1,694	1,922	3,665	3,644	5,625	2,881	2,538	1,546	1,053	775	500	2,258
1954	590	650	1,569	3,043	1,761	2,864	1,856	1,812	1,134	839	664	381	1,432
1955	2,697	2,213	2,388	1,719	2,941	5,370	3,667	1,817	2,012	1,662	3,367	1,178	2,587
1956	868	923	870	821	1,938	1,938	2,883	1,132	788	646	438	892	1,172
1957	2,051	2,319	1,682	1,894	5,502	3,535	5,315	2,015	2,075	931	660	2,446	2,506
1958	1,889	3,370	3,191	3,832	3,726	4,577	5,569	5,789	2,212	1,765	1,688	923	3,209
1959	936	1,010	2,606	2,338	1,640	2,121	3,836	1,577	1,369	1,173	959	1,196	1,731
1960	3,939	1,886	2,589	2,358	6,272	5,189	5,357	3,310	1,682	1,046	1,126	1,347	2,995

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.80	0.67	1.80	0.87	1.44	1.60	2.62	1.09	1.53	0.81	0.55	0.35	14.13
1952	.32	.69	.76	1.58	1.75	2.52	1.93	1.57	.75	.87	1.33	1.66	16.55
1953	.54	.78	.92	1.74	1.66	2.68	1.33	1.21	.71	.50	.37	.23	12.67
1954	.28	.30	.75	1.45	.76	1.36	.86	.86	.52	.40	.32	.18	8.04
1955	1.28	1.02	1.14	.82	1.27	2.56	1.70	.87	.93	.79	1.60	.54	14.52
1956	.41	.43	.42	.39	.86	.92	1.33	.54	.36	.31	.21	.41	6.59
1957	.98	1.07	.80	.90	2.36	1.68	2.46	.96	.96	.44	.31	1.13	14.05
1958	.90	1.55	1.52	1.82	1.60	2.18	2.57	2.76	1.02	.84	.80	.43	17.99
1959	.45	.47	1.24	1.11	.71	1.01	1.77	.75	.64	.56	.46	.55	9.72
1960	1.68	.87	1.23	1.12	2.80	2.47	2.47	1.58	.78	.50	.54	.62	16.86

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	2,708	15.20	
1951	1203	21,000	Dec. 9, 1950	605	2,517	1.04	14.13	2,432	13.63	
1952	1233	43,600	Sept. 2, 1952	556	2,940	1.21	16.53	2,843	16.00	
1953	1273	23,400	Mar. 25, 1953	402	2,258	.933	12.87	2,097	11.76	
1954	1333	20,100	Jan. 23, 1954	248	1,432	.592	8.04	1,809	10.15	
1955	1383	49,100	Oct. 16, 1954	288	2,587	1.07	14.52	2,196	12.34	
1956	1433	14,500	Apr. 16, 1956	250	1,172	.484	6.59	1,455	8.18	
1957	1503	31,000	Apr. 6, 1957	458	2,506	1.04	14.05	2,706	15.17	
1958	1553	26,000	May 7, 1958	792	3,209	1.33	17.99	2,884	16.18	
1959	1623	32,500	Dec. 30, 1958	506	1,751	.715	9.72	2,057	11.54	
1960	1703	33,200	Oct. 2, 1959	800	2,995	1.24	16.86	-	-	

630. Caldwell's Creek near Appomattox, Va.
(Formerly published as East Fork Felling River near Appomattox)

Location.--Lat 37°19'40", long 78°51'20", on right bank 130 ft downstream from bridge on State Highway 644 and 2.0 miles southwest of Appomattox, Appomattox County.

Drainage area.--5.1 sq mi, approximately, of which 3.5 sq mi is above flood-detention structure.

Records available.--June 1954 to September 1960. (Published as East Fork Felling River near Appomattox.)

Gage.--Water-stage recorder. Altitude of gage is 740 ft (from topographic map).

Average discharge.--6 years (1954-60), 3.88 cfs.

Extremes.--1954-60: Maximum discharge, 338 cfs Aug. 17, 1955 (gage height, 5.24 ft), from rating curve extended above 60 cfs by logarithmic plotting; minimum, 0.1 cfs Sept. 16-20, 1956.

Flood in 1928 reached a stage of 8.0 ft, from information by local resident.

Remarks.--Since August 1956, flow from 3.5 sq mi above station has been partly controlled by Soil Conservation Service flood-detention reservoir a quarter of a mile above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	1.80	1.23	1.06	0.99	-
1955	1.88	5.12	3.88	2.80	5.39	8.77	3.97	2.79	2.47	2.43	7.63	1.65	4.06
1956	1.56	1.60	1.75	1.79	3.90	3.67	4.74	2.23	1.73	.98	1.18	.54	2.13
1957	1.57	3.58	3.75	3.58	6.32	3.83	5.44	2.22	3.27	1.75	1.05	4.91	3.41
1958	2.25	8.36	5.64	7.64	7.64	8.16	8.36	7.58	7.72	2.52	2.70	1.85	5.85
1959	2.06	2.00	4.23	3.41	2.77	3.67	5.16	2.25	1.47	5.28	1.68	2.41	3.04
1960	3.92	3.57	3.04	3.30	8.27	5.96	6.56	6.83	2.50	2.00	6.31	5.51	4.80

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1954	-	-	-	-	-	-	-	-	0.39	0.28	0.24	0.22	-
1955	0.43	1.12	0.88	0.63	1.10	1.98	0.87	0.63	.54	.55	1.73	.36	10.82
1956	.35	.35	.40	.40	.83	.83	1.04	.50	.38	.22	.27	.12	5.69
1957	.36	.78	.85	.81	1.29	.87	1.19	.50	.72	.40	.24	1.07	9.08
1958	.51	1.82	1.27	1.72	1.55	1.83	1.82	1.71	1.67	.57	.61	.40	15.48

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-
1954	1383	-	-	-	-	-	-	-	-
1955	1383	338	Aug. 17, 1955	1.0	4.06	0.796	10.82	3.56	9.49
1956	1433	84	Apr. 15, 1956	.1	2.13	.418	5.69	2.46	6.58
1957	1503	46	Sept. 17, 1957	.4	3.41	.669	9.08	4.02	10.69
1958	1553	122	Nov. 19, 1957	1.6	5.85	1.14	15.48	5.19	-
1959	1623	101	Sept. 30, 1959	.6	3.04	-	-	3.22	-
1960	1703	122	Aug. 7, 1960	1.5	4.80	-	-	-	-

ROANOKE RIVER BASIN

635. Falling River at Spring Mills, Va.
(Formerly published as East Fork Falling River at Spring Mills)

Location.--Lat 37°14'40", long 78°55'30", on right bank 300 ft downstream from bridge on State Highway 646 at Spring Mills, Appomattox County, 0.6 miles upstream from Burger Branch, and 5 miles upstream from South Fork Falling River.

Drainage area.--52.2 sq mi, of which 9.8 sq mi is above flood-detention structures.

Records available.--June 1954 to September 1960. Published as East Fork Falling River at Spring Mills.

Gage.--Water-stage recorder. Altitude of gage is 470 ft (from topographic map).

Average discharge.--6 years (1954-60), 39.2 cfs.

Extremes.--1954-60: Maximum discharge, 1,530 cfs Aug. 18, 1955 (gage height, 7.93 ft); minimum, 0.7 cfs July 2, 1956 (gage height, 0.52 ft).
Flood in 1940 reached a stage of 19.2 ft, from information by local resident.

Remarks.--Prior to 1958, regulation caused by gristmill 400 ft above station. Flow from 9.8 sq mi above station slightly regulated by three Soil Conservation Service flood-detention reservoirs (two completed in 1956, one in 1958).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	23.3	13.5	11.4	8.54	-
1955	17.2	41.3	39.9	26.8	62.6	93.7	46.9	35.8	36.8	20.8	59.6	24.1	42.0
1956	18.7	20.0	18.9	18.6	35.1	38.7	46.2	22.4	17.5	13.7	10.0	11.5	22.5
1957	16.5	29.6	37.6	38.5	77.1	50.2	69.4	25.7	33.6	14.1	9.45	29.4	35.5
1958	17.0	68.6	52.2	76.8	72.3	86.5	101	89.3	40.5	25.4	27.7	16.4	55.9
1959	19.1	22.6	41.8	40.5	33.1	47.8	72.0	26.1	17.2	23.5	14.4	16.1	31.2
1960	31.3	32.9	35.6	42.4	97.7	78.4	84.2	65.0	25.7	17.8	26.9	39.4	47.8

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	0.50	0.30	0.25	0.18	-
1955	0.38	0.88	0.88	0.59	1.25	2.08	1.00	0.79	.79	.46	1.31	.52	10.93
1956	.41	.43	.42	.41	.72	.85	.99	.49	.37	.30	.22	.25	5.86
1957	.36	.63	.83	.85	1.54	1.11	1.46	.57	.72	.31	.21	.63	9.22
1958	.38	1.43	1.15	1.70	1.45	1.91	2.15	1.97	.87	.56	.61	.35	14.53
1959	.42	.48	.92	.90	.66	1.06	1.54	.58	.37	.52	.32	.34	8.11
1960	.69	.70	.79	.93	2.02	1.73	1.80	1.44	.55	.39	.59	.84	12.47

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-
1954	1383	a298	June 15, 1954	-	-	-	-	-	-
1955	1383	1,530	Aug. 18, 1955	6.2	42.0	0.805	10.93	38.6	10.05
1956	1433	710	Apr. 16, 1956	2.3	22.5	.431	5.86	24.7	6.42
1957	1503	734	Apr. 5, 1957	4.7	35.5	.680	9.22	39.8	10.36
1958	1553	1,480	Nov. 19, 1957	13	55.9	1.07	14.53	51.5	13.39
1959	1623	758	Apr. 12, 1959	7.1	31.2	.598	8.11	32.5	8.47
1960	1703	1,290	May 8, 1960	13	47.8	.961	12.47	-	-

a Maximum during period June to September.

640. Falling River near Naruna, Va.

Location.--Lat 37°07', long 78°58', on left bank at upstream side of highway bridge, 2 miles upstream from Little Falling River and 2½ miles northeast of Naruna, Campbell County.

Drainage area.--172 sq mi.

Records available.--July 1929 to January 1935, September 1941 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 412.32 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 12, 1929, to Jan. 15, 1935, chain gage at same site and datum.

Average discharge.--24 years (1929-34, 1941-60), 146 cfs.

Extremes.--1929-35, 1941-60: Maximum discharge, 15,800 cfs Sept. 18 or 19, 1944 (gage height, 23.9 ft, from floodmarks), from rating curve extended above 6,100 cfs on basis of slope-area measurements at gage heights 23.9 and 26.5 ft; minimum, 3 cfs Oct. 9, 1932 (gage height, 2.18 ft).

Flood in August 1940 reached a stage of 26.5 ft, from floodmarks (discharge, 22,000 cfs, by slope-area measurement).

Remarks.--Prior to 1958, diurnal fluctuation caused by gristmill at Spring Mills.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	126	109	276	138	209	206	282	150	129	89.4	62.7	49.7	152
1952	44.1	130	313	284	255	386	238	149	117	77.6	118	139	187
1953	68.9	135	128	216	180	299	205	124	92.2	60.8	47.6	37.8	153
1954	71.6	51.8	175	303	127	171	124	121	63.3	36.5	29.6	20.4	108
1955	49.7	83.7	120	85.8	199	294	159	120	139	61.6	302	82.6	141
1956	56.1	61.2	56.0	56.2	121	139	163	66.7	49.5	36.3	28.5	32.3	71.8
1957	50.2	89.0	117	117	266	173	258	96.2	115	45.6	37.3	116	122
1958	66.7	245	196	285	269	295	354	316	159	89.4	103	68.5	203
1959	70.7	71.6	158	125	99.9	152	254	84.4	65.5	82.0	54.3	48.4	105
1960	124	114	134	138	399	289	301	275	103	61.5	65.6	105	175

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.85	0.71	1.84	0.92	1.27	1.38	1.83	1.01	0.84	0.60	0.42	0.32	11.99
1952	.30	.84	2.10	1.90	1.60	2.58	1.54	1.00	.76	.52	.79	.90	14.83
1953	.46	.88	.86	1.45	1.09	2.01	1.33	.83	.60	.41	.32	.25	10.49
1954	.48	.34	1.18	2.03	.77	1.15	.80	.81	.41	.24	.20	.13	8.54
1955	.33	.54	.80	.58	1.21	1.97	1.03	.80	.90	.41	2.03	.54	11.14
1956	.38	.40	.38	.38	.76	.93	1.06	.45	.32	.24	.19	.21	5.70
1957	.34	.58	.78	.78	1.61	1.18	1.67	.64	.75	.31	.25	.75	9.62
1958	.45	1.59	1.31	1.91	1.62	1.98	2.30	2.12	1.03	.60	.69	.44	16.03
1959	.47	.46	1.06	.84	.60	1.02	1.65	.57	.43	.55	.36	.31	8.32
1960	.83	.74	.90	.93	2.50	1.94	1.95	1.85	.67	.41	.43	.68	13.83

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	163	12.83
1951	1203	3,520	Dec. 4, 1950	35	152	0.884	11.99	150	11.83
1952	1233	5,760	Dec. 21, 1951	33	187	1.09	14.83	174	13.79
1953	1273	1,800	Mar. 15, 1953	25	133	.773	10.49	130	10.29
1954	1333	4,970	Jan. 22, 1954	10	108	.628	8.54	104	8.21
1955	1383	5,250	Aug. 18, 1955	12	141	.820	11.14	134	10.63
1956	1433	2,180	Apr. 16, 1956	16	71.8	.417	5.70	78.8	6.24
1957	1503	2,790	Apr. 9, 1957	20	122	.709	9.62	143	11.26
1958	1553	3,760	Nov. 19, 1957	55	203	1.18	16.03	186	14.68
1959	1623	2,610	Dec. 29, 1958	24	105	.610	8.32	111	8.80
1960	1703	4,840	May 8, 1960	42	175	1.02	13.83	-	-

655. Cub Creek at Phenix, Va.

Location.--Lat 37°04'45", long 78°45'50", on right bank 10 ft upstream from bridge on State Highway 40, 0.9 mile west of Phenix, Charlotte County, 2 miles downstream from Rough Creek, and 6 miles upstream from Louse Creek.

Drainage area.--102 sq mi.

Records available.--August 1946 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 370.19 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 14, 1950, staff gage at same site and datum.

Average discharge.--14 years (1946-60), 94.7 cfs.

Extremes.--1946-60: Maximum discharge, 2,720 cfs Dec. 4, 1948 (gage height, 13.0 ft, from graph based on gage readings); minimum, 6.5 cfs Sept. 7, 1954 (gage height, 0.86 ft). Flood in August 1940 reached a stage of 17.5 ft, from floodmark.

Remarks.--Records of chemical analyses for the period October 1950 to September 1952 are published in reports of the Geological Survey.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	90.6	82.2	156	87.7	124	122	148	90.8	74.4	64.1	45.2	44.3	93.8
1952	34.1	88.8	144	164	160	210	152	89.2	58.2	56.9	76.8	85.5	110
1953	45.7	162	93.7	140	142	180	129	84.0	58.1	42.9	32.9	27.8	94.4
1954	35.6	37.8	92.9	172	79.3	145	115	87.8	87.5	30.7	23.5	13.7	76.8
1955	29.7	61.0	81.5	47.6	110	173	119	73.6	50.0	34.3	161	44.1	82.0
1956	40.0	47.9	38.5	38.1	89.4	91.6	100	50.0	35.0	33.2	22.5	24.6	50.7
1957	32.6	58.6	63.8	63.1	155	110	185	47.8	65.8	23.0	19.4	53.7	70.6
1958	37.2	113	131	140	158	173	231	189	96.9	51.2	76.0	35.0	119
1959	49.7	48.0	122	86.9	75.0	82.8	142	55.0	37.8	40.8	34.7	27.5	66.8
1960	104	79.3	87.9	89.9	248	155	222	145	57.4	36.7	42.7	58.1	110

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.02	0.90	1.76	0.99	1.27	1.38	1.62	1.03	0.81	0.72	0.51	0.48	12.49
1952	.39	.97	1.63	1.86	1.69	2.38	1.66	1.01	.64	.64	.87	.94	14.68
1953	.52	1.77	1.06	1.58	1.45	2.03	1.41	.95	.64	.49	.37	.30	12.57
1954	.40	.41	1.05	1.95	.81	1.64	1.26	.99	.96	.35	.27	.15	10.24
1955	.34	.67	.92	.54	1.12	1.96	1.30	.83	.55	.39	1.82	.48	10.92
1956	.45	.52	.43	.43	.94	1.04	1.09	.56	.38	.37	.25	.27	6.73
1957	.37	.64	.72	.71	1.58	1.24	1.81	.54	.72	.26	.22	.59	9.40
1958	.42	1.24	1.48	1.58	1.61	1.96	2.52	2.13	1.06	.58	.86	.38	15.82
1959	.56	.53	1.38	.98	.77	.94	1.55	.62	.41	.46	.39	.30	8.89
1960	1.18	.87	.99	1.02	2.62	1.75	2.43	1.64	.63	.42	.48	.64	14.67

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	113	15.08
1951	1203	938	Dec. 5, 1950	26	93.8	0.920	12.49	88.6	11.80
1952	1233	2,300	Dec. 21, 1951	24	110	1.08	14.68	113	15.04
1953	1273	2,300	Nov. 21, 1952	20	94.4	.925	12.57	85.3	11.08
1954	1333	1,870	Jan. 23, 1954	7.2	76.8	.753	10.24	77.2	10.31
1955	1383	2,620	Aug. 18, 1955	8.4	82.0	.804	10.92	78.2	10.39
1956	1433	430	Mar. 17, 1956	11	50.7	.497	6.73	53.1	7.06
1957	1503	1,090	Apr. 9, 1957	7.5	70.6	.692	9.40	81.1	10.81
1958	(a)	1,370	Feb. 27, 1958	28	119	1.17	15.82	114	15.15
1959	(a)	1,480	Dec. 30, 1958	14	66.8	.655	8.89	71.1	9.46
1960	(a)	1,870	Apr. 6, 1960	25	110	1.08	14.67	-	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

660. Roanoke (Staunton) River at Randolph, Va.

Location.--Lat 36°54'54", long 78°44'28", on right bank 14 ft downstream from bridge on State Highway 746, 2.8 miles northwest of Randolph, Charlotte County, 3.6 miles upstream from Roanoke Creek, and at mile 227.3.

Drainage area.--3,000 sq mi, approximately.

Records available.--August 1900 to September 1906, October 1927 to September 1930, October 1950 to September 1960. Monthly discharge only for some periods, published in WSP 1303. Prior to October 1902, published as Staunton River at Randolph. Gage heights collected at this site or former site since 1905 are contained in reports of the U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 307.59 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Aug. 27, 1900, to Oct. 13, 1902, wire-weight gage at site 3.2 miles downstream at datum about 5.9 ft lower. Oct. 14, 1902, to Aug. 11, 1906, and Oct. 1, 1927, to Mar. 31, 1930, wire-weight or chain gage at site of original gage at datum 3.93 ft lower than present datum.

Average discharge.--19 years (1900-1906, 1927-30, 1950-60), 3,374 cfs.

Extremes.--1900-1906, 1927-30, 1950-60: Maximum discharge, 97,000 cfs Dec. 31, 1901 (gage height, 35.0 ft, from graph based on gage readings, site and datum then in use); minimum, 256 cfs Sept. 16, 1954 (gage height, 3.88 ft).
Flood of Aug. 16, 1940, reached a stage of 41.6 ft, present site and datum (discharge, 150,000 cfs), from information by Corps of Engineers.

Remarks.--Records of chemical analyses for the period October 1950 to September 1956; suspended sediment load for the period January 1954 to September 1960; and water temperatures, are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,065	1,762	4,727	2,120	4,218	4,276	6,432	2,675	3,684	2,062	1,437	984	3,025
1952	875	1,977	4,516	4,315	4,790	6,475	4,936	3,795	1,934	1,584	3,044	4,022	3,518
1953	1,387	2,516	2,467	4,600	4,756	6,578	3,625	2,960	1,836	1,170	958	647	2,783
1954	782	844	1,993	4,188	2,407	3,664	2,425	2,281	1,446	945	797	438	1,852
1955	3,072	2,666	2,911	2,052	5,581	6,341	4,596	2,425	2,459	1,884	4,845	1,606	3,203
1956	1,068	1,192	1,125	1,026	2,581	2,633	3,644	1,435	1,037	799	570	998	1,501
1957	2,204	2,594	2,189	2,180	6,422	4,426	6,397	2,385	2,503	1,142	837	3,059	2,994
1958	2,188	4,104	4,228	4,856	5,065	5,624	6,911	7,156	2,918	2,105	2,233	1,189	4,041
1959	1,222	1,266	3,414	3,114	2,048	2,705	5,000	1,915	1,666	1,423	1,174	1,381	2,194
1960	4,767	2,356	3,215	2,951	8,130	5,949	6,994	4,102	2,023	1,272	1,428	1,762	3,725

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.79	0.65	1.82	0.82	1.47	1.65	2.39	1.03	1.37	0.79	0.55	0.37	13.70
1952	.34	.74	1.74	1.66	1.73	2.49	1.84	1.45	.72	.61	1.16	1.50	15.98
1953	.53	.94	.95	1.76	1.66	2.52	1.35	1.14	.68	.45	.37	.24	12.59
1954	.30	.31	.77	1.61	.84	1.41	.90	.88	.54	.36	.31	.16	8.39
1955	1.18	.99	1.12	.79	1.24	2.43	1.71	.93	.91	.72	1.86	.60	14.48
1956	.41	.44	.43	.39	.93	1.01	1.35	.55	.39	.31	.22	.37	6.80
1957	.85	.97	.84	.84	2.23	1.71	2.38	.92	.95	.44	.32	1.14	15.57
1958	.84	1.53	1.63	1.86	1.76	2.16	2.57	2.76	1.09	.81	.86	.44	18.31
1959	.47	.47	1.31	1.20	.71	1.04	1.86	.74	.62	.55	.45	.51	9.93
1960	1.83	.87	1.24	1.13	2.92	2.29	2.60	1.58	.75	.49	.55	.66	16.91

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1203	22,800	Dec. 9, 1950	700	3,025	1.01	13.70	2,924	13.26
1952	1233	31,600	Sept. 2, 1952	680	3,518	1.17	15.98	3,432	15.58
1953	1273	23,100	Mar. 25, 1953	544	2,783	.928	12.59	2,553	11.55
1954	1333	25,000	Jan. 23, 1954	256	1,852	.617	8.39	2,275	10.30
1955	1383	39,700	Oct. 17, 1954	318	3,203	1.07	14.48	2,759	12.47
1956	1433	14,800	Apr. 17, 1956	300	1,501	.500	6.80	1,802	8.18
1957	1503	28,600	Apr. 7, 1957	560	2,994	.998	13.57	3,289	14.91
1958	1553	28,200	May 8, 1958	1,050	4,041	1.35	18.31	3,656	16.56
1959	1623	33,800	Dec. 31, 1955	640	2,194	.731	9.93	2,566	11.62
1960	1703	28,600	Oct. 2, 1959	1,020	3,725	1.24	16.91	-	-

665. Roanoke Creek at Saxe, Va.

Location.--Lat 36°55'49", long 78°39'56", on right bank at downstream side of highway bridge, 500 ft northwest of Saxe, Charlotte County, and 4 miles upstream from mouth.

Drainage area.--162 sq mi.

Records available.--August 1946 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 322.36 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 21, 1950, staff gage at same site and datum.

Average discharge.--14 years (1946-60), 117 cfs.

Extremes.--1946-60: Maximum discharge, 4,710 cfs Aug. 18, 1955 (gage height, 13.58 ft); no flow for part of Sept. 18, 1954, from information by local observer.
Flood of Aug. 16, 1940, reached a stage of 25.7 ft (backwater from Roanoke River), from floodmark.

Remarks.--Records of chemical analyses for the period October 1950 to September 1952 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	89.3	80.0	189	94.8	138	145	168	76.4	76.0	44.8	40.5	21.6	96.7
1952	25.1	95.4	235	225	191	283	213	85.2	39.6	51.2	61.2	109	134
1953	34.3	223	123	190	210	230	147	76.1	47.2	27.3	33.0	24.5	113
1954	28.1	36.6	88.4	266	102	198	145	87.5	30.8	15.8	10.9	4.30	84.7
1955	46.2	54.0	107	49.8	136	200	258	80.8	59.2	74.3	41.9	49.3	128
1956	59.7	58.3	48.6	47.9	182	156	189	86.2	41.7	24.8	16.5	10.9	76.2
1957	35.2	65.4	90.2	82.9	254	168	173	50.0	47.0	19.9	45.9	275	105
1958	38.0	231	231	247	237	209	255	242	105	42.3	58.5	24.2	159
1959	45.4	40.8	187	130	104	92.0	212	42.2	27.7	28.1	17.8	13.5	78.3
1960	57.2	63.7	121	107	356	193	268	161	38.4	24.6	28.4	49.0	121

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.64	0.55	1.35	0.67	0.89	1.03	1.16	0.54	0.52	0.32	0.29	0.15	8.11
1952	.18	.64	1.67	1.60	1.27	2.02	1.46	.61	.27	.36	.44	.75	11.27
1953	.24	1.54	.88	1.35	1.35	1.64	1.01	.54	.32	.19	.24	.17	9.47
1954	.20	.25	.63	1.89	.66	1.41	1.00	.62	.21	.11	.08	.05	7.09
1955	.33	.37	.76	.35	.87	1.42	1.76	.58	.41	.53	2.99	.34	10.71
1956	.43	.40	.35	.34	1.21	1.11	1.30	.61	.29	.18	.12	.07	6.41
1957	.24	.45	.64	.59	1.64	1.20	1.19	.21	.32	.14	.33	1.89	8.84
1958	.27	1.60	1.65	1.75	1.52	1.49	1.75	1.72	.72	.30	.42	.17	13.36
1959	.32	.28	1.33	.93	.67	.65	1.46	.30	.19	.20	.13	.09	6.55
1960	.41	.44	.86	.76	2.37	1.38	1.85	1.14	.26	.17	.20	.34	10.18

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	132	11.02
1951	1203	960	Dec. 5, 1950	16	96.7	0.597	8.11	96.2	8.06
1952	1233	2,310	Dec. 22, 1950	15	134	.827	11.27	136	11.44
1953	1273	2,710	Nov. 21, 1952	13	113	.698	9.47	94.2	7.89
1954	1353	1,410	Mar. 2, 1954	.8	84.7	.523	7.09	89.2	7.47
1955	1383	4,710	Aug. 18, 1955	3.0	128	.790	10.71	124	10.43
1956	1433	870	Apr. 13, 1956	2.7	76.2	.470	6.41	78.1	6.56
1957	1503	2,630	Sept. 18, 1957	2.9	105	.648	8.84	131	11.03
1958	1553	1,600	May 7, 1958	17	159	.981	13.36	141	11.77
1959	1623	2,020	Dec. 30, 1958	6.6	78.3	.483	6.55	75.5	6.33
1960	1703	1,880	Feb. 19, 1960	16	121	.747	10.18	-	-

670. Roanoke (Staunton) River near Clover, Va.

Location (revised).--Lat 36°50'17", long 78°40'02", on left bank 150 ft downstream from bridge on U.S. Highway 360, 3.7 miles downstream from Roanoke Creek, 3.7 miles east of Clover, Halifax County, and at mile 220.0.

Drainage area.--3,230 sq mi, approximately.

Records available.--August 1929 to September 1952. Unpublished gage-height record since June 1956 is available in the district office of the Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 302.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--23 years (1929-52), 3,355 cfs.

Extremes.--1929-52: Maximum discharge, 160,000 cfs Aug. 16, 1940 (gage height, 37.15 ft, from floodmark), from rating curve extended above 70,000 cfs by logarithmic plotting on basis of slope-area measurement by Geological Survey, unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, 204 cfs Sept. 3, 1932 (gage height, 0.50 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,109	1,831	5,009	2,266	4,200	4,482	6,954	2,645	3,698	2,036	1,387	978	3,121
1952	909	2,062	5,054	4,721	5,131	7,101	5,426	3,884	2,023	1,675	3,123	4,283	3,779

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.75	0.63	1.79	0.81	1.35	1.60	2.40	0.94	1.27	0.73	0.49	0.34	13.10
1952	.32	.71	1.80	1.68	1.72	2.54	1.87	1.38	.70	.60	1.11	1.48	15.91

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	-	3,401	14.29
1951	1203	21,000	Dec. 9, 1950	756	3,121	0.966	13.10	3,042	12.76	-	-
1952	1235	34,400	Sept. 3, 1952	728	3,779	1.17	15.91	-	-	-	-

678. Talbott and Townes Reservoirs near Kibler, Va.

Location.--Talbott Dam, lat 36°40'40", long 80°23'50", on Dan River about 4½ miles north-east of Kibler, Patrick County. Townes Dam, lat 36°41'10", long 80°25'50", on Dan River about 4 miles north of Kibler.

Drainage area.--Talbott Reservoir, 20.2 sq mi; Townes Reservoir, 32.9 sq mi.

Records available.--February 1939 to December 1945, January 1948 to September 1960.

Remarks.--The two reservoirs are operated as a unit for storage of water for Pinnacles hydroelectric plant. Storage was started in Talbott Reservoir on Feb. 13, 1939, and in Townes Reservoir several months earlier. Total capacity of Talbott Reservoir is 350,000,000 cu ft and total capacity of Townes Reservoir is 60,000,000 cu ft. Figures given herein represent combined contents of both reservoirs. Records not previously published although changes in contents, equivalent in cubic feet per second, have been published since October 1956.

Cooperation.--Records furnished by city of Danville.

Contents, in millions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1939	-	-	-	-	-	-	-	-	-	-	-	-
1940	189.6	115.1	72.1	49.8	187.5	365.7	408.3	408.3	382.9	363.4	352.3	275.4
					84.9	89.3	207.3	284.8	369.9	487.6	427.8	427.8
1941	427.8	421.3	427.8	421.3	399.8	413.3	399.8	350.4	294.2	426.3	358.3	278.8
1942	167.8	102.7	116.5	118.0	150.8	239.5	239.1	369.6	421.3	389.4	427.8	427.8
1943	427.8	427.8	440.8	427.8	427.8	440.8	427.8	427.8	424.8	418.3	385.8	353.3
1944	254.8	188.3	111.7	67.6	97.9	185.4	234.9	273.7	230.7	180.2	72.1	68.6
1945	105.1	50.7	55.6	82.2	96.3	101.1	111.1	143.4	85.3	78.8	66.6	305.0
1946	302.4	277.0	302.4	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	226.3	311.4	406.8	386.0	345.3	240.3	141.2	128.5	73.5
1949	75.3	200.8	174.9	162.2	252.8	297.3	344.9	408.3	371.3	401.0	414.8	395.6
1950	334.5	298.4	363.1	365.9	365.9	362.0	342.5	408.3	350.1	337.1	302.4	296.0
1951	256.7	220.8	320.4	320.5	376.1	382.6	406.8	387.8	374.8	359.2	261.8	164.7
1952	90.7	74.6	169.7	204.1	314.0	408.3	408.3	402.4	365.7	295.6	409.8	333.2
1953	214.4	168.5	171.0	252.8	378.7	408.3	376.1	337.1	335.8	289.3	235.9	181.2
1954	145.7	124.2	168.4	204.9	276.0	279.2	296.0	378.7	377.4	334.5	273.6	209.4
1955	192.5	199.6	247.3	237.9	321.6	351.8	366.5	324.2	360.6	315.2	260.4	225.4
1956	206.0	177.3	142.6	115.9	185.7	264.2	322.9	291.7	302.4	325.5	293.7	302.4
1957	381.3	312.7	311.4	337.1	351.4	326.8	361.8	363.1	346.2	305.0	219.5	284.8
1958	295.0	355.3	342.3	306.3	316.5	272.2	378.9	343.6	321.6	280.5	302.4	306.3
1959	287.2	281.4	310.1	326.9	315.2	316.8	333.4	310.1	283.7	310.6	306.8	361.8
1960	389.6	345.3	342.9	316.5	360.5	401.8	363.6	320.5	317.8	296.0	296.0	289.3

685. Dan River near Francisco, N. C.

Location (revised).--Lat 36°30'53", long 80°18'11", on left bank 200 ft upstream from bridge on State Highway 704, an eighth of a mile downstream from Georges Mill, 3 miles east of Francisco, Stokes County, and 7.9 miles downstream from Little Dan River.

Drainage area.--124 sq mi.

Records available.--August 1924 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 830 ft (from topographic map). Prior to Nov. 15, 1929, chain gage at same site and datum.

Average discharge.--36 years (1924-60), 188 cfs (unadjusted).

Extremes.--1924-60: Maximum discharge, 12,400 cfs Oct. 19, 1937 (gage height, 12.45 ft); from rating curve extended above 8,500 cfs; minimum, 7.1 cfs Sept. 8, 1932 (gage height, 0.43 ft); minimum daily, 30 cfs Sept. 18, 20, 1932.
Flood in 1916 reached a stage of about 15 ft, from information by local residents (discharge, 16,000 cfs).

Remarks.--Considerable diurnal fluctuation and regulation from mills and powerplants above station. Talbot and Townes Reservoirs above Pinnacles Hydroelectric Plant in Virginia, 28 miles above station (combined capacity, 410,000,000 cu ft, revised), were completed in 1938.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	139	117	188	125	218	199	325	188	187	142	140	111	173
1952	95.1	126	208	141	188	390	291	253	163	140	242	204	202
1953	144	161	133	157	251	421	248	180	173	119	106	75.7	180
1954	64.3	61.3	98.2	160	152	187	138	141	125	110	83.6	64.6	115
1955	112	116	132	112	174	230	349	213	199	155	138	83.9	168
1956	78.6	77.0	92.2	76.2	94.9	112	214	119	78.9	77.3	61.2	91.6	97.5
1957	93.3	153	128	132	255	221	380	205	277	140	117	262	196
1958	184	324	289	281	236	215	363	398	226	185	157	98.3	246
1959	97.5	99.7	164	158	135	163	244	157	111	92.4	141	291	154
1960	469	248	261	269	463	387	441	301	209	167	197	173	300

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year		
		Observed			Adjusted ^{a/}				Observed	Adjusted ^{a/}	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	189	*188	*20.63
1951	1203	3,050	Dec. 7, 1950	64	173	*169	*1.36	*18.46	171	*186	*18.19
1952	1233	3,470	Dec. 21, 1951	53	202	*198	*1.60	*21.78	205	*204	*22.46
1953	1273	5,440	Mar. 23, 1953	52	180	*175	*1.41	*19.24	162	*162	*17.77
1954	1333	3,150	Feb. 21, 1954	48	115	*116	*.935	*12.69	127	*130	*14.25
1955	1383	5,580	June 11, 1955	48	168	*169	*1.36	*18.46	158	*155	*16.97
1956	1433	3,050	Apr. 16, 1956	39	97.5	*99.9	*.806	*10.94	108	113	12.41
1957	1503	6,590	Sept. 16, 1957	60	196	195	1.57	21.31	231	232	25.38
1958	1553	3,250	Nov. 19, 1957	68	246	247	1.99	27.01	210	209	22.94
1959	1623	4,840	Sept. 30, 1959	44	154	156	1.26	17.10	208	209	22.94
1960	1703	b2,650	Feb. 18, 1960	120	300	298	2.40	32.67	-	-	-

* Not previously published.

a Adjusted for change in contents in Talbott and Townes Reservoirs.

b Maximum independent peak discharge; maximum discharge during year, 4,240 cfs at 12:30 a.m.

Oct. 1 (a secondary rise following peak of Sept. 30, 1959).

Note.--Monthly figures of discharge in cubic feet per second per square mile and runoff in inches, since 1938, published in some water-supply papers, are subject to error due to regulation in Talbott and Townes Reservoirs. Those figures are not published herein and should not be used.

700. North Mayo River near Spencer, Va.

Location.--Lat 36°34'05", long 79°59'15", on left bank 800 ft downstream from highway bridge at Moores Mill, 2 miles downstream from Horse Pasture Creek, and 4 miles south-east of Spencer, Henry County.

Drainage area.--108 sq mi.

Records available.--October 1928 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 730.94 ft above mean sea level (levels by Corps of Engineers). Prior to Jan. 23, 1936 (corrected), chain gage at site 800 ft upstream at datum 1.50 ft higher. July 25 to Sept. 27, 1936, staff gage at present site and datum.

Average discharge.--32 years (1928-60), 123 cfs.

Extremes.--1928-60: Maximum discharge, 17,200 cfs Oct. 9, 1947 (gage height, 15.80 ft), from rating curve extended above 6,500 cfs (corrected) by logarithmic plotting on basis of velocity-area study; minimum, 14 cfs Aug. 11, 1956 (gage height, 1.10 ft).

Remarks.--Records of chemical analyses for the period October 1950 to September 1951 are published in report of the Geological Survey.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	124	86.0	169	81.8	162	145	222	117	132	87.8	69.8	49.0	120
1952	44.7	76.2	178	108	154	287	206	143	83.5	63.3	94.0	99.0	128
1953	57.7	71.4	80.5	161	183	246	130	96.9	87.5	70.7	46.0	31.0	105
1954	33.6	40.3	79.1	170	84.2	116	89.5	102	79.4	60.4	40.2	25.7	76.9
1955	95.3	73.9	120	69.5	147	149	170	96.2	97.4	72.1	80.4	46.7	101
1956	42.9	46.5	43.5	40.6	84.3	91.3	152	58.0	45.0	35.2	27.0	89.2	62.6
1957	125	82.3	75.0	74.1	159	125	219	89.4	109	80.0	51.5	263	122
1958	113	261	170	170	175	188	239	136	97.1	132	71.2	71.2	170
1959	84.3	85.2	172	122	89.0	115	178	85.2	66.0	61.2	52.4	206	110
1960	258	103	137	143	364	272	242	184	127	88.4	97.1	122	177

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.33	0.89	1.80	0.87	1.56	1.54	2.30	1.24	1.36	0.94	0.74	0.51	15.08
1952	.48	.79	1.90	1.15	1.54	3.07	2.13	1.52	.86	.68	1.00	1.02	16.14
1953	.62	.74	.86	1.72	1.76	2.63	1.34	1.03	.90	.76	.49	.32	13.17
1954	.36	.42	.84	1.81	.81	1.23	.92	1.09	.82	.64	.43	.27	9.64
1955	1.02	.76	1.28	.74	1.42	1.59	1.75	1.03	1.01	.77	.86	.48	12.71
1956	.46	.48	.46	.43	.84	.97	1.57	.62	.47	.38	.29	.92	7.89
1957	1.34	.85	.78	.79	1.53	1.31	2.26	.95	1.13	.85	.55	2.92	15.26
1958	1.21	2.70	1.81	1.81	1.69	2.01	2.99	2.55	1.41	1.04	1.41	.74	21.37
1959	.90	.88	1.83	1.30	.86	1.22	1.84	.91	.68	.65	.56	2.13	13.76
1960	2.76	1.06	1.46	1.52	3.64	2.90	2.50	1.96	1.32	.94	1.04	1.26	22.36

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	125	15.74
1951	1203	1,680	Feb. 7, 1951	41	120	1.11	15.08	113	14.23
1952	1233	2,270	Dec. 21, 1951	37	128	1.19	16.14	120	15.19
1953	1273	2,500	Mar. 24, 1953	26	105	.972	13.17	100	12.57
1954	1333	2,200	Jan. 22, 1954	21	76.9	.712	9.64	88.3	11.08
1955	1383	2,420	Oct. 15, 1954	19	101	.935	12.71	87.9	11.05
1956	1433	1,680	Apr. 16, Sept. 27	15	62.6	.580	7.89	75.0	9.46
1957	1503	6,350	Sept. 17, 1957	34	122	1.13	15.26	143	18.01
1958	(a)	2,580	Nov. 19, 1957	62	170	1.57	21.37	153	19.26
1959	(a)	3,150	Dec. 29, 1958	36	110	1.02	13.76	123	15.43
1960	(a)	4,490	Oct. 1, 1959	66	177	1.64	22.36	-	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

705. Mayo River near Price, N. C.

Location.--Lat 36°32'10" (revised), long 79°59'30", on right bank 300 ft downstream from Anglins Bridge, half a mile downstream from confluence of North and South Mayo Rivers, three-quarters of a mile downstream from Virginia-North Carolina State line, and 4 miles west of Price, Rockingham County.

Drainage area.--260 sq mi.

Records available.--July 1929 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 689.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 29, 1929, staff gage at same site and datum.

Average discharge.--31 years (1929-60), 323 cfs.

Extremes.--1929-60: Maximum discharge, 30,000 cfs Oct. 19, 1937 (gage height, 14.00 ft), from rating curve extended above 8,000 cfs by logarithmic plotting; minimum, 32 cfs Oct. 8, 1954 (gage height, 0.55 ft).

Remarks.--Slight infrequent diurnal fluctuation at low flow caused by small mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	287	213	426	219	414	365	570	291	289	216	175	130	299
1952	118	186	447	276	384	767	455	374	225	174	287	300	333
1953	159	200	211	392	500	683	364	251	236	185	130	89.3	282
1954	91.2	109	210	435	238	304	236	262	197	167	107	62.0	202
1955	239	183	275	177	364	382	534	300	299	207	226	133	276
1956	118	124	118	112	233	257	388	157	123	106	90.4	221	170
1957	258	200	197	202	402	323	583	253	426	198	146	657	318
1958	277	578	431	416	413	437	694	612	357	259	308	181	413
1959	183	185	415	314	248	292	457	253	198	192	200	640	298
1960	711	298	389	405	900	700	643	483	335	233	248	352	473

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.27	0.91	1.69	0.97	1.66	1.62	2.45	1.29	1.24	0.96	0.78	0.56	15.60
1952	.52	.80	1.98	1.22	1.59	3.40	1.95	1.66	.96	.77	1.27	1.29	17.41
1953	.70	.86	.94	1.74	2.00	3.03	1.56	1.11	1.01	.82	.58	.38	14.73
1954	.40	.47	.93	1.93	.95	1.35	1.01	1.16	.84	.74	.47	.27	10.52
1955	1.06	.79	1.22	.79	1.46	1.70	2.29	1.33	1.28	.92	1.00	.57	14.41
1956	.52	.53	.52	.50	.96	1.14	1.67	.70	.53	.47	.40	.95	8.89
1957	1.15	†.66	.87	.90	1.61	1.43	2.50	1.12	1.83	.68	.65	2.82	16.62
1958	1.23	2.48	1.91	1.85	1.66	1.94	2.98	2.71	1.53	1.15	1.36	.78	21.58
1959	.81	.79	1.84	1.39	.99	1.29	1.96	1.12	.85	.65	.88	2.75	15.52
1960	3.15	1.28	1.73	1.60	3.73	3.11	2.76	2.14	1.44	1.03	1.10	1.51	24.78

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	320	16.73
1951	1203	4,350	Feb. 7, 1951	108	299	1.15	15.80	284	14.83
1952	1233	6,310	Dec. 21, 1951	98	333	1.28	17.41	318	16.61
1953	1273	6,130	Mar. 24, 1953	70	282	1.08	14.73	269	14.03
1954	1333	5,680	Jan. 22, 1954	42	202	.777	10.52	226	11.79
1955	1383	6,960	Oct. 15, 1954	35	276	1.06	14.41	247	12.91
1956	1433	4,450	Apr. 16, 1956	36	170	.854	8.89	195	10.20
1957	1503	13,200	Sept. 17, 1957	90	318	1.22	16.62	371	19.36
1958	1553	4,230	Apr. 28, 1958	155	413	1.59	21.58	372	19.40
1959	1623	10,500	Sept. 30, 1959	103	298	1.15	15.52	350	18.24
1960	1703	a5,740	Feb. 6, 1960	170	473	1.82	24.78	-	-

a Maximum peak discharge; maximum discharge during year, 10,500 cfs at 12:01 a.m. Oct. 1, stage falling.

710. Dan River near Wentworth, N. C.

Location.--Lat 36°25', long 79°50', on right bank 600 ft downstream from Settles Bridge, $\frac{3}{4}$ miles northwest of Wentworth, Rockingham County, and $7\frac{1}{2}$ miles downstream from Mayo River.

Drainage area.--1,050 sq mi, approximately.

Records available.--October 1939 to September 1960. Monthly discharge only for October 1939, published in WSP 1303.

Gage.--Water-stage recorder. Altitude of gage is 518 ft (by barometer). Prior to Aug. 3, 1949, at site 150 ft upstream at same datum.

Average discharge.--21 years (1939-60), 1,190 cfs.

Extremes.--1939-60: Maximum discharge, 56,800 cfs Sept. 18, 1945 (gage height, 27.78 ft), from rating curve extended above 16,500 cfs on basis of slope-area measurement of peak flow at gage height 26.9 ft and runoff comparisons; minimum, 65 cfs Oct. 8, 1954 (gage height, 0.93 ft); minimum daily, 107 cfs Oct. 2, 1954.

Flood in 1908 reached a stage of 34.9 ft, from information by North Carolina State Highway Commission, and flood in 1937 reached a stage of 29.8 ft, from information by local resident.

Remarks.--Slight diurnal fluctuation and regulation at low flow caused by powerplants above station. Records of chemical analyses and water temperatures for the period October 1950 to September 1951 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	768	646	1,212	752	1,468	1,402	2,196	1,000	920	654	624	363	996
1952	320	537	1,424	1,028	1,365	3,329	1,664	1,281	763	549	984	1,006	1,189
1953	466	628	695	1,470	2,035	2,652	1,264	887	1,093	576	386	290	1,031
1954	237	297	717	1,962	901	1,544	949	869	649	499	367	166	748
1955	1,341	791	1,152	653	1,542	1,480	2,341	989	864	867	965	391	1,111
1956	406	414	422	392	1,104	1,046	1,739	607	387	338	297	864	664
1957	807	633	1,144	846	2,146	1,342	2,424	817	1,317	601	517	1,789	1,187
1958	1,015	2,963	1,799	1,598	1,576	1,564	3,279	2,168	1,170	841	932	463	1,610
1959	535	538	1,429	1,098	875	1,085	1,690	807	586	613	615	1,705	964
1960	3,676	1,066	1,646	1,698	4,308	3,019	2,871	1,935	1,096	784	864	945	1,985

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.84	0.69	1.33	0.83	1.46	1.54	2.33	1.10	0.98	0.72	0.69	0.39	12.90
1952	.35	.57	1.56	1.13	1.40	3.86	1.77	1.41	.81	.60	1.08	1.07	15.41
1953	.51	.67	.76	1.61	2.02	2.91	1.54	.97	1.16	.63	.42	.31	13.31
1954	.26	.32	.79	2.15	.89	1.48	1.01	.95	.69	.55	.40	.18	9.67
1955	1.47	.84	1.27	.72	1.53	1.63	2.49	1.09	.92	.95	1.06	.42	14.39
1956	.45	.44	.46	.43	1.13	1.15	1.85	.67	.41	.37	.33	.92	8.61
1957	.89	.67	1.26	.93	2.13	1.47	2.58	.90	1.40	.66	.57	1.90	15.36
1958	1.11	3.15	1.98	1.75	1.56	1.72	3.48	2.38	1.24	.92	1.02	1.49	20.80
1959	.59	.57	1.57	1.21	.87	1.19	1.80	.69	.62	.67	.66	1.81	12.47
1960	4.04	1.13	1.81	1.86	4.42	3.32	3.05	2.12	1.16	.86	.95	1.00	25.72

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,095	14.13
1951	1203	12,200	Feb. 8, 1951	272	996	0.949	12.90	967	12.52
1952	1235	16,400	Dec. 22, 1951	255	1,189	1.13	15.41	1,147	14.87
1953	1273	19,600	Mar. 24, 1953	200	1,031	.982	13.31	986	12.74
1954	1335	19,700	Jan. 23, 1954	116	748	.712	9.67	919	11.68
1955	1383	26,500	Oct. 16, 1954	107	1,111	1.06	14.39	939	12.16
1956	1433	14,800	Apr. 16, 1956	136	664	.632	8.61	777	10.08
1957	1503	21,500	Sept. 18, 1957	285	1,187	1.13	15.36	1,452	18.78
1958	1553	18,200	Nov. 20, 1957	376	1,610	1.53	20.80	1,339	17.29
1959	1623	19,900	Dec. 29, 1958	242	964	.918	12.47	1,292	16.72
1960	1703	22,500	Oct. 1, 1959	564	1,985	1.89	25.72	-	-

719. Philpott Reservoir near Philpott, Va.

Location--Lat 36°46'50", long 80°01'40", at Philpott Dam on Smith River, 3.1 miles west of Philpott, Henry County, 11.8 miles upstream from Reed Creek, and at mile 44.3.

Drainage area--212 sq mi.

Records available--August 1950 to September 1960.

Gage--Remote water-stage recorder and indicator. Datum of gage is at mean sea level, datum of 1929.

Extremes--1950-60: Maximum contents, 7,591,200,000 cu ft Oct. 1, 1959 (elevation, 976.38 ft); minimum (after first filling to rule curve) 2,925,000,000 cu ft Sept. 26, 1956 (elevation, 927.59 ft).

Remarks--Reservoir is formed by concrete dam. Spillway, with crest at elevation 985 ft, is ungated and 120 ft long. Storage began in August 1950 during construction; initial filling started in December 1951; water in reservoir first reached rule-curve elevation in July 1953. Total capacity at elevation 998 ft (maximum flood-control pool) is 10,881,300,000 cu ft, of which 2,104,000,000 cu ft is above elevation 985 ft (spillway crest), 1,485,400,000 cu ft is controlled flood storage between elevation 974 ft (maximum power pool) and elevation 985 ft, 4,839,500,000 cu ft is available for power between elevation 920 ft (minimum power pool) and elevation 974 ft, and 2,452,400 cu ft is dead storage below elevation 920 ft. Usable capacity is 6,324,900,000 cu ft between elevations 920 ft and 985 ft. Figures given herein represent total contents. Reservoir is used for flood control, hydroelectric power, low-water regulation for navigation and pollution abatement, and recreation. Records not previously published, although changes in contents, equivalent in cubic feet per second, have been published since October 1950.

Cooperation--Records furnished by Corps of Engineers.

Contents, in millions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1950	-	-	-	-	-	-	-	-	-	-	12	11
1951	11	11	12	12	15	175	234	135	141	145	120	19
1952	14	10	381	577	1,217	1,485	1,682	1,529	1,762	1,829	2,062	1,898
1953	1,819	2,186	2,291	3,062	4,131	5,973	6,651	7,070	7,190	7,064	6,992	6,548
1954	6,192	5,858	5,746	5,850	5,960	6,114	6,105	6,259	6,213	5,945	5,574	5,139
1955	5,212	5,027	4,975	4,779	5,012	5,435	6,074	6,119	6,213	6,050	6,040	5,864
1956	5,560	5,229	4,887	4,513	4,429	4,361	4,642	4,391	4,059	3,664	3,095	3,132
1957	3,612	3,961	4,166	4,403	5,268	5,880	7,280	7,279	7,279	7,120	6,832	7,299
1958	7,030	7,283	7,110	7,104	7,289	7,397	7,262	7,249	7,281	7,253	7,088	6,858
1959	6,565	6,409	6,626	6,697	6,590	6,784	7,246	7,103	6,868	6,658	6,592	7,532
1960	7,104	7,032	6,961	6,972	7,339	7,440	7,204	7,313	7,186	7,031	7,024	6,860

720. Smith River near Philpott, Va.

Location.--Lat 36°46'50", long 80°01'30", on left bank 900 ft downstream from Philpott Dam, 3.1 miles west of Philpott, Henry County, and 11.6 miles upstream from Reed Creek.

Drainage area.--212 sq mi.

Records available.--August 1946 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 804.27 ft above mean sea level (Corps of Engineers bench mark). Prior to Oct. 8, 1952, at site 1.9 miles downstream at different datum.

Average discharge.--14 years (1946-60), 294 cfs (adjusted for storage).

Extremes.--1946-60: Maximum discharge, 17,000 cfs June 29, 1949 (gage height, 20.3 ft, site and datum then in use), from rating curve extended above 9,700 cfs on basis of slope-area measurements at gage heights 18.2 and 20.3 ft; minimum, 4 cfs Aug. 12, 1953 (gage height, 1.50 ft); minimum daily, 30 cfs Oct. 12, 1958.

Remarks.--Since August 1950, flow regulated by Philpott Reservoir.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	233	183	474	209	420	316	515	336	291	230	161	140	291
1952	96.1	168	219	155	136	623	368	381	104	130	281	333	250
1953	163	70.5	179	71.1	58.2	60.5	78.7	87.3	161	173	118	252	123
1954	217	219	225	208	225	214	208	210	210	210	216	218	215
1955	150	219	214	216	231	217	221	203	216	211	209	198	209
1956	209	214	213	221	233	216	223	215	230	233	255	126	216
1957	110	100	96.8	96.0	101	97.5	104	200	268	187	196	332	157
1958	395	382	498	486	365	427	723	622	348	256	260	249	418
1959	234	177	175	221	204	177	175	227	183	182	184	214	196
1960	702	286	378	319	586	619	718	364	315	245	191	241	413

Monthly and yearly runoff, in inches (adjusted) a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.26	0.95	2.55	1.13	2.05	2.03	2.92	1.49	1.53	1.24	0.81	0.53	18.49
1952	.51	.87	1.92	1.23	1.97	3.90	2.31	1.74	1.01	.83	1.98	1.41	19.68
1953	.73	1.12	1.19	1.95	2.46	4.07	1.80	1.33	1.09	.68	.49	.43	17.34
1954	.46	.47	.99	1.55	1.33	1.48	1.08	1.45	1.02	.60	.42	.26	10.91
1955	.96	.78	1.05	.78	1.60	2.04	2.46	1.20	1.33	.82	1.11	.68	14.81
1956	.52	.46	.46	.44	1.02	1.03	1.74	.66	.54	.46	.23	.74	8.30
1957	1.57	1.24	.94	1.00	2.26	1.78	3.39	1.09	1.41	.70	.48	2.70	18.56
1958	1.60	2.52	2.35	2.63	2.17	2.54	3.54	3.36	1.90	1.34	1.08	.81	25.84
1959	.72	.62	1.40	1.35	.79	1.31	1.90	.94	.48	.52	.50	3.44	13.97
1960	2.95	1.36	1.91	1.75	3.73	3.57	3.30	2.20	1.40	1.02	1.02	.94	25.15

a Adjusted for change in contents in Philpott Reservoir.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted a/			Observed		Adjusted a/
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	325	325	21.62
1951	1203	9,500	Dec. 7, 1950	58	291	291	1.56	18.49	257	269	17.03
1952	1233	3,300	Dec. 4, 1951	64	250	309	1.44	19.68	245	305	19.42
1953	1333	4,030	Dec. 13, 1952	39	123	270	1.27	17.34	144	254	16.22
1954	1333	1,300	Nov. 10, 1953	57	215	170	1.802	10.91	208	184	11.78
1955	1383	1,720	June 28, 1955	53	209	232	1.09	14.81	213	210	13.46
1956	1433	1,650	July 17, 1956	44	216	130	.613	8.30	188	165	10.61
1957	1503	1,340	June 7, 1957	34	157	289	1.36	18.56	239	332	21.28
1958	1553	4,920	Feb. 28, 1958	34	418	403	1.90	25.84	360	345	22.11
1959	1623	1,560	(b)	30	196	218	1.03	13.97	262	273	17.45
1960	1703	1,560	June 2, 1960	36	413	392	1.85	25.15	-	-	-

a Adjusted for change in contents in Philpott Reservoir.

b Oct. 22, 30, 1958, Jan. 27, Sept. 30, 1959.

725. Smith River at Bassett, Va.

Location--Lat 36°46'15", long 80°00'00", on left bank 5 ft upstream from highway bridge at north edge of North Bassett, 1.0 mile northwest of Bassett, Henry County, 3.0 miles downstream from Town Creek, and 5.6 miles upstream from Reed Creek.

Drainage area--253 sq mi.

Records available--April 1939 to September 1960.

Gage--Water-stage recorder. Datum of gage is 753.09 ft above mean sea level (levels by Corps of Engineers).

Average discharge--21 years (1939-60), 343 cfs (adjusted for storage).

Extremes--1939-60: Maximum discharge, 26,600 cfs Aug. 14, 1940 (gage height, 18.28 ft); minimum, 19 cfs July 19, 1956; minimum daily, 48 cfs Sept. 8, 9, 1959; minimum gage height, 1.06 ft Sept. 18, 26, 1953.

Maximum stage known, about 22.9 ft Oct. 19, 1937, from information by local residents (discharge, 38,200 cfs, from rating curve extended above 24,000 cfs on basis of backwater studies and records for station at Martinsville).

Remarks--Since August 1950, flow regulated by Philpott Reservoir. Records of chemical analyses for the period October 1950 to September 1951 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	285	221	587	242	498	407	673	417	381	267	197	170	361
1952	121	228	321	209	208	798	461	458	143	163	372	383	323
1953	183	98.4	202	128	136	129	103	105	169	169	124	253	150
1954	230	231	236	255	251	249	239	242	247	239	228	227	239
1955	185	242	254	233	318	252	295	243	254	236	269	237	251
1956	233	249	233	242	266	257	290	253	263	275	291	159	251
1957	148	138	132	133	190	155	149	252	332	200	203	454	206
1958	456	524	534	537	424	471	820	670	388	277	279	253	469
1959	246	189	229	238	210	194	204	239	180	176	170	255	211
1960	764	302	415	335	696	662	749	392	314	248	194	252	443

Monthly and yearly runoff, in inches (adjusted)^{a/}

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.30	0.98	2.68	1.10	2.05	2.13	3.17	1.64	1.68	1.22	0.85	0.58	19.38
1952	.54	1.00	2.09	1.28	1.97	4.09	2.36	1.82	1.03	.86	2.09	1.41	20.54
1953	.70	1.06	1.10	1.89	2.37	3.72	1.61	1.19	.95	.56	.44	.36	15.95
1954	.44	.45	.88	1.34	1.22	1.40	1.04	1.56	1.01	.63	.41	.26	10.44
1955	.97	.75	1.07	.73	1.71	1.87	2.39	1.19	1.28	.80	1.21	.75	14.72
1956	.54	.54	.48	.46	.99	1.05	1.75	.72	.60	.58	.36	.76	8.83
1957	1.49	1.20	.95	1.01	2.26	1.74	3.04	1.15	1.46	.64	.43	2.80	18.17
1958	1.61	2.74	2.13	2.43	2.06	2.33	3.39	3.03	1.76	1.21	.99	.69	24.37
1959	.68	.57	1.42	1.21	.68	1.18	1.72	.84	.59	.41	.36	3.06	12.50
1960	2.76	1.20	1.78	1.54	3.59	3.19	2.90	1.97	1.17	.87	.87	.83	22.67

^a Adjusted for change in contents in Philpott Reservoir.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year			
		Observed			Adjusted ^{a/}				Observed	Adjusted ^{a/}		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Mean	Runoff in inches
		Discharge	Date									
1950	-	-	-	-	-	-	-	-	402	402	402	21.47
1951	1203	12,800	Dec. 7, 1950	81	361	361	1.43	19.38	325	337	337	18.05
1952	1233	4,000	Dec. 4, 1951	86	323	392	1.51	20.54	307	367	367	19.77
1953	1273	2,470	Dec. 13, 1952	64	150	297	1.17	15.95	168	278	278	14.86
1954	1333	2,410	Jan. 22, 1954	56	239	194	.767	10.44	238	214	214	11.46
1955	1383	2,850	Oct. 15, 1954	61	251	274	1.08	14.72	254	251	251	13.49
1956	1433	2,930	July 17, 1955	61	251	165	.652	8.83	226	203	203	10.91
1957	1503	5,350	Sept. 17, 1957	54	206	338	1.34	19.17	299	392	392	21.01
1958	1553	5,200	Nov. 19, 1957	77	469	454	1.79	24.37	398	383	383	20.54
1959	1623	6,100	Sept. 30, 1959	48	211	233	.921	12.50	280	291	291	15.59
1960	1703	3,850	Feb. 5, 1960	67	443	422	1.67	22.67	-	-	-	-

^a Adjusted for change in contents in Philpott Reservoir.

730. Smith River at Martinsville, Va.

Location--Lat 36°39'45", long 79°52'55", on right bank 800 ft downstream from bridge on U.S. Highways 58 and 220, at south edge of Martinsville (revised), Henry County, and 5.0 miles downstream from Beaver Creek.

Drainage area--374 sq mi.

Records available--August 1929 to September 1960.

Gage--Water-stage recorder. Datum of gage is 657.22 ft above mean sea level, datum of 1929, supplementary adjustment of 1986.

Average discharge--31 years (1929-60), 456 cfs (adjusted for storage).

Extremes--1929-60: Maximum discharge, 39,000 cfs Oct. 19, 1937 (gage height, 21.50 ft), from rating curve extended above 14,000 cfs on basis of computations of flow over dam at gage heights 16.76 and 21.50 ft; minimum, 3.8 cfs Mar. 19, 1955 (gage height, 1.14 ft); minimum daily, 19 cfs Oct. 6, 1935.

Remarks--Flow regulated by Philpott Reservoir. Some additional regulation by powerplant 1,000 ft above station. Records of chemical analyses for the period November 1950 to September 1951 are published in report of the Geological Survey.

Cooperation--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	398	293	691	304	614	529	812	488	479	357	259	205	451
1952	163	302	528	326	355	1,040	600	602	231	238	495	490	449
1953	240	162	270	257	293	348	206	196	264	254	165	264	243
1954	257	259	326	456	381	439	365	368	343	270	243	241	329
1955	351	324	378	297	421	397	392	292	349	295	357	284	343
1956	293	316	307	298	394	359	446	296	314	325	343	277	330
1957	293	209	207	206	358	261	425	348	431	258	249	740	330
1958	513	742	638	684	577	628	996	902	496	368	371	338	604
1959	338	296	413	406	338	346	412	343	283	229	222	451	340
1960	885	395	567	506	1,017	952	988	565	412	322	289	374	604

Monthly and yearly runoff, in inches (adjusted) a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.22	0.87	2.13	0.94	1.71	1.81	2.56	1.33	1.44	1.11	0.77	0.50	16.39
1952	.50	.90	2.05	1.23	1.76	3.52	2.02	1.68	.96	.81	1.80	1.27	18.50
1953	.65	.91	.95	1.68	2.05	3.19	1.40	1.08	.92	.64	.43	.28	14.18
1954	.38	.39	.88	1.52	1.19	1.53	1.08	1.31	.97	.52	.32	.22	10.31
1955	1.10	.75	1.10	.69	1.44	1.71	1.91	.95	1.15	.72	1.09	.64	13.25
1956	.55	.56	.55	.49	1.04	1.03	1.65	.62	.55	.55	.40	.87	8.86
1957	1.45	1.03	.87	.91	1.99	1.51	2.88	1.07	1.28	.61	.43	2.74	16.77
1958	1.27	2.51	1.76	2.10	1.82	2.06	2.81	2.77	1.52	1.10	.96	.72	21.40
1959	.73	.70	1.52	1.34	.82	1.27	1.78	.89	.57	.44	.40	2.66	13.12
1960	2.24	1.09	1.67	1.57	3.35	3.06	2.68	1.87	1.08	.81	.88	.93	21.23

a Adjusted for change in contents in Philpott Reservoir.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Observed			Adjusted a/			Observed		Adjusted a/	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	501	501	18.18
1951	1203	12,500	Dec. 7, 1950	119	451	451	1.21	16.39	418	430	15.62
1952	1233	6,440	Sept. 1, 1952	112	449	508	1.36	18.50	422	482	17.56
1953	1273	4,880	Mar. 24, 1953	78	243	390	1.04	14.18	257	367	13.32
1954	1333	5,960	Jan. 22, 1954	29	329	284	.759	10.31	345	321	11.61
1955	1383	9,000	Oct. 15, 1954	47	343	366	.979	13.25	333	330	11.96
1956	1433	4,430	Apr. 16, 1956	40	330	244	.652	8.86	313	290	10.55
1957	1503	10,900	Sept. 17, 1957	47	330	462	1.24	16.77	430	523	18.96
1958	(b)	7,240	Nov. 19, 1957	80	604	589	1.57	21.40	534	519	18.81
1959	(b)	9,510	Sept. 30, 1959	33	340	362	.968	13.12	407	418	15.17
1960	(b)	7,720	Feb. 5, 1960	72	604	583	1.56	21.23	-	-	-

a Adjusted for change in contents in Philpott Reservoir.

b Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

740. Smith River at Spray, N. C.

Location (revised).--Lat 36°31'50", long 79°46'10", on right bank 0.9 mile south of Virginia-North Carolina State line, 1 mile downstream from Stuart Creek, and 1 mile north of Spray, Rockingham County.

Drainage area.--538 sq mi.

Records available.--October 1939 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 539.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--21 years (1939-60), 621 cfs (adjusted for storage).

Extremes.--1939-60: Maximum discharge, 45,600 cfs Aug. 15, 1940 (gage height, 19.28 ft), from rating curve extended above 12,000 cfs on basis of computation of peak flow over dam $1\frac{1}{2}$ miles downstream; minimum, 60 cfs Oct. 12, 1953; minimum daily, 66 cfs Sept. 10, 1944.

Remarks.--Flow regulated since August 1950 by Philpott Reservoir. Some additional regulation by powerplant at Martinsville, Va.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	528	384	943	454	988	734	1,150	677	670	489	322	248	622
1952	201	364	726	444	546	1,407	803	786	339	272	579	615	591
1953	277	264	389	493	566	694	342	320	350	290	194	285	371
1954	284	288	403	745	534	655	486	502	477	401	289	266	444
1955	516	412	514	352	605	654	634	382	477	395	530	331	483
1956	315	336	337	324	486	501	723	365	383	324	326	345	396
1957	405	268	361	299	572	412	761	530	645	314	288	958	485
1958	648	1,239	898	959	870	895	1,422	1,313	780	558	564	391	877
1959	409	366	682	573	458	526	706	549	392	368	324	660	501
1960	1,288	494	737	621	1,521	1,326	1,350	805	703	483	423	484	850

Monthly and yearly runoff, in inches (adjusted)^{a/}

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.13	0.80	2.02	0.97	1.72	1.71	2.48	1.33	1.40	1.05	0.67	0.43	15.71
1952	.43	.75	1.86	1.11	1.61	3.23	1.82	1.57	.89	.64	1.43	1.15	16.49
1953	.53	.84	.92	1.67	1.95	2.96	1.25	1.02	.82	.52	.36	.24	13.08
1954	1.32	.33	.77	1.68	1.12	1.52	1.00	1.20	.95	.64	.32	.20	10.05
1955	1.16	.71	1.06	.60	1.35	1.74	1.83	.86	1.06	.72	1.13	.55	12.77
1956	.43	.43	.45	.39	.91	1.02	1.72	.58	.53	.38	.24	.74	7.82
1957	1.26	.87	.98	.83	1.80	1.37	2.70	1.14	1.34	.55	.39	2.36	15.59
1958	1.18	2.78	1.79	2.05	1.83	2.01	2.84	2.80	1.64	1.18	1.08	.61	21.79
1959	.66	.63	1.64	1.29	.80	1.27	1.85	1.06	.62	.60	.50	2.28	13.19
1960	2.42	.97	1.52	1.34	3.34	2.93	2.61	1.81	1.36	.91	.90	.87	20.96

^a Adjusted for change in contents in Philpott Reservoir; adjustments furnished by Corps of Engineers.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted ^{a/}					Observed		Adjusted ^{a/}
		Momentary maximum		Minimum day	Mean	Mean	Mean	Per square mile	Runoff in inches			Mean	Mean	Runoff in inches
		Discharge	Date											
1950	-	-	-	-	-	-	-	-	-	-	-	674	674	17.00
1951	1203	12,000	Dec. 8, 1950	144	622	622	1.16	15.71	574	586	14.80			
1952	1233	7,870	Dec. 21, 1951	148	591	650	1.21	16.49	561	621	15.74			
1953	1273	6,750	Mar. 24, 1953	107	371	518	.963	13.08	375	485	12.21			
1954	1333	8,800	Jan. 22, 1954	84	444	399	.742	10.05	483	459	11.56			
1955	1383	12,200	Oct. 15, 1954	85	483	506	.941	12.77	444	441	11.15			
1956	1433	5,500	Apr. 16, 1956	93	396	310	.576	7.82	403	380	9.62			
1957	1503	11,800	Sept. 17, 1957	127	485	617	1.15	15.59	628	721	18.23			
1958	1553	9,800	Nov. 19, 1957	150	877	862	1.60	21.79	767	752	19.00			
1959	1623	12,200	Sept. 30, 1959	120	501	523	.972	13.19	591	602	15.20			
1960	1703	68,220	Feb. 6, 1960	160	850	829	1.54	20.96	-	-	-			

^a Adjusted for change in contents in Philpott Reservoir; adjustments furnished by Corps of Engineers.

^b Maximum peak discharge; maximum discharge during year, 12,000 cfs at 12:01 a.m. Oct. 1, stage falling.

745. Sandy River near Danville, Va.

Location.--Lat 36°37'10", long 79°30'10", on right bank 200 ft downstream from Hickory Forest Creek, 400 ft upstream from bridge on road between Callahans Store and Mount Cross, 5.5 miles northwest of western corporate limits of Danville, Pittsylvania County, and 5.8 miles upstream from mouth.

Drainage area.--113 sq mi.

Records available.--October 1929 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 460.38 ft above mean sea level, unadjusted. Prior to June 26, 1942, water-stage recorder at site 1,200 ft downstream at datum 5.57 ft lower.

Average discharge.--31 years (1929-60), 103 cfs.

Extremes.--1929-60: Maximum discharge, 23,000 cfs Aug. 14, 1940 (gage height, 14.8 ft, present datum, from floodmarks), from rating curve extended above 3,600 cfs by logarithmic plotting; minimum, 3 cfs Sept. 29, 1930 (gage height, 0.40 ft, site and datum then in use); minimum daily, 8 cfs Aug. 29, 31, Sept. 1, 2, 1932.

Remarks.--Diurnal fluctuation at low flow caused by small mill above station.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	65.7	65.8	120	67.5	111	117	158	68.7	103	53.6	32.7	24.0	82.0
1952	25.7	51.2	159	97.0	136	253	148	97.0	61.4	53.9	93.2	82.7	105
1953	43.2	64.0	76.0	134	152	196	96.9	55.9	50.2	35.0	28.4	20.9	79.0
1954	23.4	32.5	69.4	202	79.6	116	83.8	94.3	85.1	56.4	33.9	19.0	74.8
1955	174	59.4	119	58.2	151	153	155	78.8	85.6	86.8	187	56.9	114
1956	46.6	51.4	45.6	45.3	101	112	198	73.5	63.4	31.2	37.5	61.7	71.9
1957	118	79.8	144	91.3	178	116	258	71.0	77.2	35.6	26.1	134	108
1958	56.2	261	124	148	178	169	254	225	101	78.9	112	51.4	148
1959	62.5	62.3	210	111	86.3	120	152	74.6	47.8	63.1	46.7	69.8	92.4
1960	169	79.0	118	112	328	202	216	114	88.4	72.5	85.5	121	141

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.67	0.65	1.22	0.69	1.02	1.20	1.56	0.70	1.02	0.55	0.33	0.24	9.85
1952	.26	.51	1.63	.99	1.29	2.58	1.46	.99	.61	.55	.95	.82	12.64
1953	.44	.63	.78	1.37	1.41	1.99	.96	.57	.50	.36	.29	.21	9.51
1954	.24	.32	.71	2.06	.73	1.19	.83	.96	.84	.58	.35	.19	9.00
1955	1.78	.59	1.21	.59	1.40	1.56	1.53	.80	.85	.89	1.90	.56	13.66
1956	.48	.51	.47	.46	.96	1.14	1.95	.75	.63	.32	.38	.61	8.66
1957	1.20	.79	1.46	.93	1.64	1.19	2.35	.72	.76	.36	.27	1.33	13.00
1958	.57	2.78	1.27	1.51	1.64	1.73	2.51	2.29	1.00	.80	1.14	.51	17.75
1959	.64	.61	2.14	1.13	.80	1.22	1.51	.76	.47	.64	.48	.69	11.09
1960	1.73	.78	1.20	1.14	3.13	2.06	2.13	1.16	.87	.74	.87	1.19	17.00

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	92.8	11.14
1951	1203	3,630	June 18, 1951	18	82.0	0.726	9.85	80.7	9.71
1952	1233	2,270	Aug. 31, 1952	17	105	.929	12.64	100	12.09
1953	1273	1,330	Mar. 24, 1953	14	79.0	.699	9.51	74.1	8.93
1954	1333	2,840	Jan. 22, 1954	13	74.8	.662	9.00	94.1	11.31
1955	1383	7,830	Oct. 15, 1954	12	114	1.01	13.66	96.0	11.54
1956	1433	1,570	Mar. 16, 1956	14	71.9	.636	8.66	88.7	10.65
1957	1503	3,260	Apr. 8, 1957	14	108	.956	13.00	118	14.17
1958	(a)	4,110	Nov. 19, 1957	40	148	1.31	17.75	138	16.52
1959	(a)	4,270	Dec. 29, 1958	22	92.4	.818	11.09	95.0	11.41
1960	(a)	2,700	Apr. 5, 1960	49	141	1.25	17.00	-	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

ROANOKE RIVER BASIN

750. Dan River at Danville, Va.

Location.--Lat 36°35'15", long 79°22'55", on left bank 50 ft downstream from Southern Railway bridge in Danville, Pittsylvania County, 1,000 ft upstream from Fall Creek, and at mile 62.7.

Drainage area.--2,050 sq mi, approximately.

Records available.--August 1934 to September 1960. Gage-height records collected in this vicinity 1890-1934, at same site 1934-49, and at Main Street Bridge, 0.25 mile upstream 1949-60, are contained in reports of the U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 379.29 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--26 years (1934-60), 2,379 cfs (adjusted for storage).

Extremes.--1934-60: Maximum discharge, 75,000 cfs Aug. 15, 1940 (gage height, 20.96 ft); minimum, 40 cfs Dec. 8, 1946 (gage height, 1.19 ft); minimum daily, 245 cfs Sept. 14, 1954.

Remarks.--Diurnal fluctuation caused by cotton mills above station. Since August 1950, flow regulated by Philpott Reservoir on Smith River (usable capacity, 145,200 acre-ft).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,659	1,148	2,723	1,533	2,843	2,707	4,487	2,027	2,459	1,379	868	689	2,035
1952	624	1,052	2,748	2,327	3,507	6,686	3,373	2,581	1,224	1,020	1,981	2,146	2,439
1953	869	1,148	1,443	2,638	3,225	4,429	2,060	1,342	1,598	1,003	701	678	1,753
1954	646	744	1,433	3,917	1,786	2,723	1,748	1,608	1,374	1,102	694	458	1,522
1955	2,815	1,901	3,180	1,512	2,665	2,770	3,991	1,902	1,684	1,708	2,279	933	2,260
1956	851	901	859	808	2,317	2,295	3,838	1,289	898	754	777	1,547	1,419
1957	1,675	1,342	2,224	1,469	4,289	2,244	4,462	1,708	2,415	1,004	948	3,324	2,235
1958	2,067	5,870	3,534	3,522	3,273	3,100	6,949	5,092	2,325	1,693	2,023	961	3,363
1959	1,169	1,160	3,142	2,471	1,986	2,263	3,084	1,451	1,028	1,347	1,033	2,628	1,894
1960	6,272	1,670	2,629	2,567	8,280	5,615	5,804	3,241	2,077	1,510	1,666	1,869	3,583

Monthly and yearly runoff, in inches (adjusted) a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.93	0.62	1.53	0.86	1.45	1.52	2.44	1.14	1.34	0.78	0.49	0.37	13.47
1952	.35	.57	1.63	1.35	1.98	3.82	1.87	1.42	.72	.59	1.16	1.14	16.60
1953	.47	.70	.83	1.65	1.86	2.88	1.26	.84	.89	.54	.39	.28	12.58
1954	.29	.33	.78	2.22	.93	1.57	.95	.94	.74	.56	.31	.16	9.78
1955	1.60	1.00	1.78	.70	1.41	1.65	2.31	1.08	.94	.93	1.28	.47	15.15
1956	.42	.42	.41	.38	1.20	1.28	2.14	.67	.42	.54	.32	.85	8.65
1957	1.04	.80	1.29	.88	2.36	1.40	2.72	.96	1.32	.53	.47	1.91	15.68
1958	1.11	3.25	1.95	1.98	1.70	1.76	3.75	2.86	1.27	.95	1.10	.48	22.16
1959	.60	.60	1.81	1.41	.99	1.31	1.78	.77	.51	.71	.53	1.67	12.69
1960	3.44	.89	1.46	1.44	4.43	3.18	3.11	1.84	1.10	.82	.94	.98	23.63

a Adjusted for change in contents in Philpott Reservoir since October 1951.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Observed				Adjusted a/		Observed		Adjusted a/	
		Momentary		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	-	2,218	14.68
1951	1203	20,900	June 18, 1951	500	2,035	-	0.993	13.47	1,942	1,954	12.94
1952	1233	23,500	Mar. 25, 1952	476	2,439	2,498	1.22	16.60	2,357	2,417	16.05
1953	1273	21,900	Mar. 25, 1953	340	1,753	1,900	.927	12.58	1,700	1,810	11.98
1954	1333	25,500	Jan. 23, 1954	245	1,522	1,477	.720	9.78	1,950	1,926	12.76
1955	1383	39,200	Oct. 16, 1954	255	2,260	2,283	1.11	15.15	1,814	1,811	12.02
1956	1433	18,400	Apr. 17, 1956	294	1,419	1,333	.650	8.85	1,641	1,618	10.73
1957	1503	25,500	Sept. 19, 1957	530	2,235	2,367	1.15	15.68	2,752	2,845	18.86
1958	1553	27,000	Apr. 29, 1958	610	3,363	3,348	1.63	22.16	2,866	2,851	18.86
1959	1623	32,100	Dec. 29, 1958	580	1,894	1,816	.935	12.69	2,325	2,336	15.47
1960	1703	27,700	Oct. 11, 1959	780	3,583	3,562	1.74	23.63	-	-	-

a Adjusted for change in contents in Philpott Reservoir since October 1951.

755. Dan River at Paces, Va.

Location.--Lat 36°38'32", long 79°05'23", on right bank 12 ft downstream from highway bridge, 0.5 mile southeast of Paces, Halifax County, 0.5 mile upstream from Big Toby Creek, 2.7 miles upstream from Birch Creek, and at mile 36.0

Drainage area.--2,550 sq mi, approximately.

Records available.--October 1950 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 317.37 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--10 years (1950-60), 2,569 cfs (adjusted for storage).

Extremes.--1950-60: Maximum discharge, 34,000 cfs Oct. 17, 1954 (gage height, 25.40 ft); minimum, 193 cfs Sept. 4, 1956 (gage height, 1.71 ft); minimum daily, 244 cfs Sept. 4, 1956.

Flood of Aug. 16, 1940, reached a stage of 32.3 ft, from floodmark.

Remarks.--Diurnal fluctuation caused by cotton mills at Danville. Since August 1950, flow regulated by Philpott Reservoir on Smith River. Records of chemical analyses for the period October 1955 to August 1956; suspended sediment loads for the period January 1954 to September 1960, and water temperatures, are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	#1,685	#1,429	2,899	1,644	3,149	2,985	4,871	2,071	2,705	1,579	1,109	691	#2,225
1952	648	1,239	3,307	2,973	3,411	7,402	3,409	2,928	1,474	1,355	2,124	2,741	2,753
1953	999	1,702	1,965	3,489	4,270	4,897	2,560	1,583	1,762	1,100	727	678	2,132
1954	616	778	1,576	4,391	1,988	3,139	2,220	1,967	1,623	1,266	812	452	1,739
1955	2,903	1,822	2,748	1,487	3,345	3,672	4,743	2,009	1,829	1,790	3,070	1,187	2,546
1956	1,371	1,139	1,091	1,036	2,968	2,721	4,132	1,641	1,043	994	944	1,527	1,708
1957	1,972	1,694	2,433	1,692	5,370	3,021	5,145	1,775	2,685	1,127	1,017	3,512	2,591
1958	2,147	6,184	4,045	4,159	3,808	3,653	7,388	5,510	2,381	1,693	2,032	1,108	3,663
1959	1,411	1,318	3,266	2,623	2,176	2,239	3,892	1,785	1,288	1,358	1,136	2,624	2,090
1960	7,253	2,172	3,438	3,369	9,141	5,679	6,410	3,625	2,154	1,569	1,754	1,983	4,023

* Not previously published; estimated or partly estimated on basis of records for station at South Boston.

Monthly and yearly runoff, in inches (adjusted) a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	#0.76	#0.62	1.31	0.74	1.28	1.35	2.13	0.94	1.18	0.71	0.50	0.30	#11.82
1952	.29	.54	1.56	1.37	1.55	3.39	1.53	1.30	.68	.82	1.00	1.17	15.00
1953	.44	.81	.91	1.71	1.93	2.52	1.24	.79	.79	.48	.32	.22	12.16
1954	.22	.28	.69	2.01	.83	1.44	.97	.92	.70	.53	.30	.12	9.01
1955	1.33	.77	1.23	.64	1.41	1.73	2.19	.92	.82	.78	1.38	.49	13.69
1956	.57	.44	.44	.40	1.24	1.22	1.85	.70	.40	.38	.33	.67	8.64
1957	.97	.80	1.13	.80	2.34	1.46	2.49	.80	1.17	.48	.41	1.62	14.47
1958	.92	2.74	1.80	1.88	1.58	1.67	3.21	2.49	1.05	.76	.89	.44	19.43
1959	.59	.55	1.51	1.20	.87	1.04	1.78	.78	.52	.58	.47	1.34	11.23
1960	3.20	.94	1.54	1.52	3.93	2.58	2.77	1.66	.92	.68	.79	.82	21.35

* Not previously published; see footnote to preceding table.

a Adjusted for change in contents in Philpott Reservoir since October 1951.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted a/			Observed		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	-	-	-
1951	1203	23,200	Apr. 10, 1951	565	#2,225	-	#0.873	#11.82	2,156	2,168	11.52
1952	1233	25,700	Mar. 26, 1952	518	2,753	2,812	1.10	15.00	2,707	2,767	14.77
1953	1273	20,200	Mar. 26, 1953	440	2,132	2,279	.894	12.16	1,991	2,101	11.19
1954	1335	24,800	Jan. 24, 1954	265	1,739	1,694	.664	9.01	2,118	2,094	11.15
1955	1393	34,000	Oct. 17, 1954	280	2,546	2,569	1.01	13.69	2,219	2,216	11.61
1956	1433	17,300	Apr. 17, 1956	244	1,708	1,622	.636	8.64	1,918	1,895	10.09
1957	1503	26,100	Feb. 2, 1957	400	2,591	2,723	1.07	14.47	3,111	3,204	17.03
1958	1553	25,300	Apr. 30, 1958	775	3,668	3,653	1.43	19.43	3,140	3,125	16.62
1959	1623	30,300	Dec. 30, 1958	600	2,090	2,112	.828	11.23	2,671	2,682	14.26
1960	1703	30,900	Oct. 12, 1959	840	4,023	4,002	1.57	21.35	-	-	-

* Not previously published.

a Adjusted for change in contents in Philpott Reservoir since October 1951.

760. Dan River at South Boston, Va.

Location.--Lat 36°41'37", long 78°54'09", on left bank 100 ft upstream from Norfolk and Western Railway bridge at South Boston, Halifax County, 1 mile downstream from Lawsons Creek, 6 miles upstream from Banister River, and at mile 22.6.

Drainage area.--2,730 sq mi, approximately.

Records available.--August 1900 to May 1907, October 1922 to September 1952. Monthly discharge only for some periods, published in WSP 1303. Unpublished gage-height records since October 1952 are available in the district office of the Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 299.23 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. August 1900 to May 1907, wire or chain gage at same site at datum 3.06 ft higher. Apr. 28, 1923, to Dec. 8, 1928, chain gage at same site and datum.

Average discharge.--36 years (1900-1906, 1922-52), 3,007 cfs (adjusted for storage).

Extremes.--1900-1907, 1922-52: Maximum discharge, 81,000 cfs Aug. 16, 1940 (gage height, 31.8 ft, from floodmark); minimum, 161 cfs Sept. 20, 1932 (gage height, 3.11 ft); minimum daily, 208 cfs Sept. 15, 1932.

Remarks.--Flow slightly regulated since August 1950 by Philpott Reservoir on Smith River. Diurnal fluctuation at low flow caused by cotton mills at Danville. Water supply for South Boston diverted just above station. Records of chemical analyses for the period October 1950 to September 1952, and water temperatures, are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,914	1,583	3,306	1,776	3,398	3,306	5,505	2,225	3,015	1,666	1,214	758	2,462
1952	684	1,298	3,665	3,398	3,687	8,489	3,704	3,047	1,544	1,435	2,125	3,032	3,012

Monthly and yearly runoff, in inches (adjusted) a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.81	0.65	1.40	0.75	1.29	1.40	2.25	0.94	1.23	0.70	0.51	0.31	12.24
1952	.29	.53	1.60	1.46	1.55	3.63	1.54	1.27	.67	.62	.93	1.22	15.31

a Adjusted for change in contents in Philpott Reservoir since October 1951.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year		
		Observed			Adjusted a/			Observed	Adjusted a/	
		Momentary maximum	Minimum	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date	day						
1950	-	-	-	-	-	-	-	2,702	-	13.43
1951	1203	22,400	Apr. 10-11, 1951	557	2,462	0.902	12.24	2,364	2,376	11.80
1952	1233	26,300	Mar. 26, 1952	513	3,012	3,071	15.31	-	-	-

a Adjusted for change in contents in Philpott Reservoir since October 1951.

765. Georges Creek near Gretna, Va.

Location.--Lat 36°56'10", long 79°18'50", on left bank 15 ft downstream from bridge on State Highway 40, 2.8 miles southeast of Gretna, Pittsylvania County, and 5.8 miles upstream from Whitethorn Creek.

Drainage area.--9.2 sq mi, approximately.

Records available.--September 1949 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 629.54 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--11 years (1949-60), 9.35 ft.

Extremes.--1949-60: Maximum discharge, 1,100 cfs (revised) Sept. 13, 1950 (gage height, 6.48 ft), from rating curve extended above 120 cfs on basis of slope-area measurements at gage heights 4.93 and 6.23 ft; minimum daily, 1.0 cfs Mar. 12, Apr. 5, 1956.

Remarks.--Records of chemical analyses for the period October 1950 to September 1951 are published in report of the Geological Survey.

Cooperation.--Subsequent to June 30, 1957, station maintained and records computed and furnished by Virginia Department of Conservation and Economic Development, Division of Water Resources.

Revisions.--The momentary maximum discharge and discharge for one day in the water 1950 were revised in WSP 1703, the resulting revised records as summarized herewith supersede those published in WSP 1303.

Month	Mean	Per square mile	Runoff in inches	Momentary maximum		Minimum day
				Discharge	Date	
September 1950.....	13.8	1.50	1.67	-	-	-
Water year 1949-50...	9.22	1.00	13.60	1,100	Sept. 13, 1950	3.7

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	7.56	6.88	10.3	7.47	9.24	10.1	13.1	7.56	8.35	6.32	5.85	3.28	7.99
1952	3.51	8.38	15.7	12.3	14.2	16.5	16.8	9.96	7.08	7.03	13.6	12.7	11.5
1953	6.95	8.82	9.26	12.3	12.3	14.2	9.76	7.52	7.53	5.53	4.61	3.66	8.51
1954	4.10	4.83	7.54	20.0	7.37	8.39	7.95	7.14	5.52	3.93	3.63	2.06	6.89
1955	10.8	7.37	7.49	5.90	8.85	21.8	10.4	6.68	9.08	11.1	15.3	8.01	10.3
1956	5.31	6.35	2.95	3.78	7.81	7.79	10.5	5.31	4.48	5.23	4.17	4.15	5.63
1957	9.22	6.90	9.04	8.36	13.9	9.75	15.2	9.67	14.1	6.58	5.86	13.7	10.1
1958	8.66	22.6	13.2	14.3	16.5	15.6	18.3	23.3	11.2	8.61	11.9	7.12	14.2
1959	8.10	6.98	14.0	8.50	7.44	9.09	12.0	7.34	5.10	7.78	3.58	7.10	8.09
1960	8.02	7.40	8.15	8.19	22.6	14.0	16.6	11.1	7.41	7.58	7.17	9.14	10.5

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.95	0.83	1.29	0.94	1.04	1.27	1.58	0.95	1.01	0.79	0.73	0.40	11.78
1952	.44	1.02	1.97	1.54	1.66	2.06	2.04	1.24	.86	.88	1.71	1.54	16.96
1953	.87	1.07	1.16	1.54	1.40	1.78	1.18	.94	.91	.69	.58	.44	12.56
1954	.51	.59	.95	2.50	.83	1.05	.96	.89	.67	.49	.46	.25	10.15
1955	1.35	.89	.94	.74	1.00	2.73	1.26	.84	1.10	1.40	1.91	.97	15.13
1956	.67	.77	.37	.47	.92	.98	1.27	.67	.54	.65	.52	.50	8.33
1957	1.15	.84	1.15	1.05	1.57	1.22	1.84	1.21	1.71	.80	.75	1.66	14.91
1958	1.08	2.74	1.65	1.79	1.86	1.96	2.22	2.92	1.36	1.08	1.49	.86	21.01
1959	1.01	.85	1.75	1.07	.84	1.14	1.45	.92	.62	.98	.45	.86	11.94
1960	1.01	.90	1.02	1.03	2.65	1.75	2.01	1.40	.90	.95	.90	1.11	15.63

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1203	1703	261 Dec. 4, 1950	2.8	7.99	0.868	11.78	8.92	15.16
1952	1233	1703	865 Sept. 1, 1952	2.8	11.5	1.21	16.96	8.23	12.14
1953	1333	1333	191 June 22, 1953	3.2	8.51	.925	12.56	7.80	11.51
1954	1333	1333	460 Jan. 22, 1954	1.4	6.89	.749	10.15	7.67	11.28
1955	1383	1383	932 Oct. 15, 1954	1.9	10.3	1.12	15.13	9.32	13.76
1956	1433	1433	196 Aug. 16, 1956	1.0	5.63	.612	8.33	6.52	9.64
1957	1503	1503	390 Sept. 17, 1957	3.4	10.1	1.10	14.91	11.7	17.26
1958	(a)	842	Nov. 19, 1957	6.4	14.2	1.54	21.01	13.0	19.15
1959	(a)	580	Dec. 28, 1958	2.5	8.09	.879	11.94	7.62	11.26
1960	(a)	246	Feb. 19, 1960	4.4	10.5	1.14	15.63	-	-

a Bulletin 26: Virginia Department of Conservation and Economic Development, Division of Water Resources.

770. Banister River at Halifax, Va.

Location.--Lat 36°46'35", long 78°54'58", on left bank 10 ft downstream from bridge on U.S. Highway 360, 1,700 ft downstream from Terrible Creek, 1 mile northeast of Halifax, Halifax County, and 10 miles upstream from mouth.

Drainage area.--552 sq mi.

Records available.--September 1904 to December 1905, October 1928 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 318.54 ft above mean sea level (levels by Corps of Engineers). Sept. 28, 1904, to Dec. 31, 1905, chain gage at site 400 ft upstream at different datum. Dec. 9, 1928, to Sept. 20, 1950, water-stage recorder at site 400 ft upstream at same datum.

Average discharge.--33 years (1904-5, 1928-60), 521 cfs.

Extremes.--1904-5, 1928-60: Maximum discharge, 50,000 cfs Sept. 20, 1944 (gage height, 40.8 ft, from floodmarks), from rating curve extended above 11,000 cfs on basis of slope-area measurement of peak flow and velocity-area study; minimum, 6 cfs on many days in August and September 1932; minimum daily, 6 cfs Aug. 30, 1932.

Remarks.--Low and medium flow regulated by powerplant half a mile above station. Records of chemical analyses for the period October 1950 to September 1951 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	274	288	648	335	508	606	797	286	434	270	177	100	393
1952	115	235	646	582	696	1,058	717	372	223	222	306	578	478
1953	170	440	425	695	742	841	516	296	287	146	197	81.4	400
1954	84.8	116	253	693	374	579	504	395	289	244	89.2	29.4	322
1955	578	397	483	246	619	918	862	368	299	462	1,092	299	552
1956	196	227	212	201	456	537	760	297	198	160	132	143	292
1957	268	314	441	356	1,003	656	978	263	483	154	181	545	465
1958	237	1,122	735	936	912	854	1,315	1,163	395	239	302	173	696
1959	236	237	1,037	605	434	455	815	275	157	291	140	173	405
1960	520	342	564	507	1,557	940	1,077	619	318	205	288	148	586

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.57	0.58	1.35	0.70	0.96	1.27	1.61	0.60	0.68	0.56	0.37	0.20	9.65
1952	.24	.48	1.35	1.21	1.36	2.21	1.45	.78	.45	.46	.64	1.17	11.80
1953	.36	.89	.89	1.45	1.40	1.75	1.04	.60	.58	.30	.41	.16	9.83
1954	.18	.23	.53	1.87	.71	1.21	1.02	.83	.58	.51	.19	.06	7.92
1955	1.21	.80	1.01	.51	1.17	1.91	1.74	.77	.60	.96	2.28	.60	13.56
1956	.41	.46	.44	.42	.89	1.12	1.54	.62	.40	.33	.28	.29	7.20
1957	.56	.63	.92	.74	1.90	1.37	1.98	.55	.98	.32	.38	1.10	11.43
1958	.49	2.26	1.53	1.96	1.72	1.79	2.66	2.43	.80	.50	.63	.35	17.12
1959	.49	.48	2.17	1.26	.82	.95	1.65	.57	.32	.61	.29	.35	9.96
1960	1.09	.69	1.18	1.06	3.04	1.96	2.18	1.29	.64	.43	.60	.30	14.46

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	460	11.32
1951	1203	3,320	Dec. 5, 1950	31	393	0.712	9.65	375	9.22
1952	1233	6,740	Sept. 2, 1952	36	478	.866	11.80	481	11.87
1953	1273	3,500	Nov. 21, 1952	27	400	.725	9.83	352	8.83
1954	1333	5,260	Jan. 24, 1954	26	322	.583	7.92	406	10.00
1955	1383	10,100	Aug. 19, 1955	60	552	1.00	13.56	483	11.85
1956	1433	3,450	Apr. 12, 1956	26	292	.529	7.20	324	8.00
1957	1503	5,400	Apr. 10, 1957	18	465	.842	11.43	553	13.60
1958	1553	7,330	May 7, 1958	28	696	1.26	17.12	649	15.98
1959	1623	11,000	Dec. 30, 1958	28	405	.734	9.96	398	9.78
1960	1703	5,800	Apr. 6, 1960	39	586	1.06	14.46	-	-

775. Hyco River near Denniston, Va.

Location.--Lat 36°35'16", long 78°53'56", on left bank 10 ft upstream from bridge on U.S. Highway 501, 0.8 mile upstream from Mayo Creek, 2 miles east of Denniston, Halifax County, and 8 miles south of South Boston.

Drainage area.--289 sq mi.

Records available.--October 1928 to September 1934, October 1950 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 315.24 ft above mean sea level. July 10, 1929, to Mar. 14, 1934, chain gage at same site and datum.

Average discharge.--16 years (1928-34, 1950-60), 254 cfs.

Extremes.--1928-34, 1950-60: Maximum discharge, 7,630 cfs (revised) Oct. 3, 1929 (gage height, 21.88 ft, from graph based on gage readings), from rating curve extended above 2,900 cfs; minimum, 0.004 cfs Sept. 14, 1932 (gage height, 3.58 ft), result of discharge measurement.

Floods in August 1928 and September 1945 reached stages of 26.4 and 25.6 ft, respectively, from floodmarks.

Remarks.--Small diurnal fluctuation at low flow in some years caused by mill above station. Records of chemical analyses for the period October 1950 to September 1951 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	106	66.0	359	127	322	389	503	83.4	326	78.7	44.2	12.5	200
1952	10.2	45.4	417	649	523	990	398	357	89.5	162	90.3	229	331
1953	38.6	355	251	691	663	576	191	69.9	202	26.0	5.65	5.74	254
1954	3.75	8.29	48.8	577	143	396	276	157	228	63.1	11.2	.71	160
1955	135	198	397	127	408	595	468	109	40.5	195	502	62.5	270
1956	303	97.8	64.8	52.5	644	422	487	233	60.1	56.9	102	68.4	214
1957	230	191	248	221	1,178	532	410	105	51.1	19.4	135	241	290
1958	111	622	401	730	425	459	732	767	86.2	95.7	103	13.7	378
1959	21.0	39.1	522	355	385	176	524	107	175	32.5	29.4	64.0	201
1960	391	361	367	352	1,363	652	761	268	50.6	36.6	58.7	72.1	390

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.42	0.25	1.43	0.51	1.16	1.56	1.94	0.33	1.26	0.31	0.18	0.05	9.40
1952	.04	.18	1.66	2.59	1.95	3.95	1.54	1.43	.35	.65	.56	.88	15.58
1953	.15	1.37	1.00	2.78	2.38	2.29	.74	.28	.78	.10	.02	.02	11.89
1954	.02	.03	.19	2.31	.52	1.58	1.07	.63	.88	.25	.04	.003	7.52
1955	.54	.76	1.58	.51	1.47	2.38	1.81	.43	.16	.78	2.01	.24	12.67
1956	1.21	.38	.26	.21	2.40	1.68	1.89	.93	.23	.23	.41	.26	10.09
1957	.92	.74	.99	.88	4.25	2.12	1.58	.42	.20	.08	.54	.93	13.65
1958	.44	2.40	1.60	2.92	1.53	1.83	2.82	3.06	.33	.37	.41	.05	17.76
1959	.08	.15	2.08	1.42	1.39	.70	2.02	.43	.67	.13	.12	.25	9.44
1960	1.56	1.39	1.46	1.40	5.09	2.60	2.94	1.07	.20	.15	.23	.28	18.37

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1203	-	Apr. 11, 1951	5.9	200	0.692	9.40	195	9.18
1952	1233	-	Mar. 6, 1952	4.2	331	1.15	15.58	344	16.22
1953	1273	-	-	2.0	254	.879	11.89	205	9.61
1954	1333	-	June 17, 1954	3	180	.554	7.52	216	10.16
1955	1383	-	-	2.6	270	.934	12.67	247	11.64
1956	1433	-	Oct. 3, 1955	5.6	214	.740	10.09	231	10.89
1957	1503	-	Feb. 2, 1957	1.5	290	1.00	13.65	329	15.44
1958	1553	-	Nov. 27, Jan. 16	8.2	378	1.31	17.76	333	15.63
1959	1623	-	Dec. 30, 1958	5.7	201	.696	9.44	246	11.54
1960	1703	4,480	Feb. 20, 1960	8.0	390	1.35	18.37	-	-

Note.--Previously published figures of maximum discharge for water years 1951-56 may be in error due to backwater from Mayo Creek; those figures are not published herein.

ROANOKE RIVER BASIN

790. Roanoke (Staunton) River at Clarksville, Va.

Location.--Lat 36°37'40", long 78°33'04", on right bank 6 ft downstream from highway bridge in Clarksville, Mecklenburg County, 500 ft upstream from Dan River, and at mile 199.0. Records include flow of Dan River.

Drainage area.--7,320 sq mi, approximately, includes that of Dan River.

Records available.--October 1934 to September 1952. Monthly discharge only for some periods, published in WSP 1303. October 1895 to February 1898, gage heights and discharge measurements for both Roanoke and Dan Rivers at Southern Railway bridge 2,000 ft above confluence. Gage-height records collected in vicinity since 1891 are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 258.23 ft above mean sea level, datum of 1929.

Average discharge.--18 years (1934-52), 8,375 cfs (adjusted for storage).

Extremes.--1934-52: Maximum discharge, 280,000 cfs Aug. 17, 1940 (gage height, 26.66 ft); minimum, 1,100 cfs Sept. 11, 1944 (gage height, 1.02 ft).

Remarks.--Small diurnal fluctuations at low flow caused by cotton mills at Danville and powerplant on Banister River. Slight regulation by Philpott Reservoir on Smith River since August 1950.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4,686	4,085	10,250	4,970	8,878	9,611	14,710	5,694	7,623	4,425	3,045	1,998	6,641
1952	1,672	3,716	10,328	10,762	11,337	19,253	11,150	8,438	4,141	3,707	6,346	8,753	8,298

Monthly and yearly runoff, in inches (adjusted) ^a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.74	0.62	1.61	0.78	1.26	1.51	2.24	0.90	1.16	0.70	0.48	0.30	12.30
1952	.26	.57	1.65	1.71	1.70	3.04	1.71	1.31	.64	.59	1.01	1.33	15.52

^a Adjusted for change in contents in Philpott Reservoirs since October 1951.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted ^a /			Observed	Adjusted ^a /	
		Momentary maximum		Minimum	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date	day							
1950	-	-	-	-	-	-	-	-	7,603	-	14.10
1951	1203	42,000	Apr. 11, 1951	1,600	6,641	-	0.907	12.30	6,362	-	11.81
1952	1233	65,000	Sept. 3, 1952	1,320	8,298	8,357	1.14	15.52	-	-	-

^a Adjusted for change in contents in Philpott Reservoir since October 1951.

794.9. John H. Kerr Reservoir near Boydton, Va.

Location.--Lat 36°35'56", long 78°18'06", at John H. Kerr Dam on Roanoke River, 2.7 miles upstream from Allen Creek, 6.7 miles southeast of Boydton, Mecklenburg County, 18 miles upstream from the Virginia-North Carolina State line, and at mile 178.7.

Drainage area.--7,780 sq mi, approximately.

Records available.--July 1950 to September 1960.

Gage.--Remote water-stage recorder and indicator. Datum of gage is at mean sea level, datum of 1929.

Extremes.--1950-60: Maximum contents, 88,152,000,000 cu ft May 10, 1958 (elevation, 309.02 ft); minimum (after first filling to rule curve), 33,742,000,000 cu ft Feb. 3, 1956 (elevation, 280.23 ft).

Remarks.--Reservoir is formed by concrete dam with earth embankments. Spillway, with crest at elevation 288.00 ft, is equipped with 22 taintor gates 32 ft high by 42 ft wide. Storage began in July 1950 during construction; initial filling started June 30, 1952; water in reservoir first reached rule-curve elevation in March 1953. Total capacity at elevation 320 ft (top of gates) is 122,334,000,000 cu ft, of which 55,687,000,000 cu ft is controlled flood storage between elevations 300 ft (top of power pool) and 320 ft, 32,818,000,000 cu ft between elevations 280.3 ft (bottom of power pool) and 300 ft is available for power, and 33,829,000,000 cu ft below elevation 280.3 ft is dead storage. Figures given herein represent total contents. Reservoir is used for flood control, hydroelectric power, low-water regulation for navigation and pollution abatement, and recreation. Records not previously published, although combined changes in contents, equivalent in cubic feet per second, for this and other reservoirs have been published since October 1950.

Cooperation.--Records furnished by Corps of Engineers.

Contents, in millions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1950	-	-	-	-	-	-	-	-	-	87	78	100
1951	292	292	358	358	401	451	396	237	392	261	174	156
1952	172	194	418	3,056	436	782	6,016	1,490	503	5,567	13,669	20,077
1953	21,175	28,941	34,473	36,577	53,753	64,399	62,003	63,227	65,828	62,509	56,480	50,460
1954	46,653	45,385	46,587	63,432	55,700	63,781	63,040	62,796	64,604	61,001	56,166	48,286
1955	52,350	51,096	50,634	47,258	62,387	69,687	71,948	67,274	64,900	62,857	64,983	55,513
1956	51,379	46,278	40,367	34,595	47,324	57,164	69,356	63,824	62,164	59,442	52,899	50,011
1957	50,874	49,310	50,787	52,581	64,438	70,815	71,425	65,344	65,828	62,103	58,484	60,226
1958	55,086	69,465	60,087	64,856	67,509	73,307	76,064	70,419	67,122	63,863	62,064	53,496
1959	47,781	44,923	58,658	64,421	60,640	69,199	72,240	65,597	62,064	62,347	54,994	53,605
1960	62,204	64,965	64,316	59,599	77,228	70,685	72,558	71,356	66,185	64,586	60,601	57,795

795. Roanoke River at Buggs Island, Va.

Location.--Lat 36°36'06", long 78°17'56", opposite Buggs Island on left bank 1,200 ft downstream from John H. Kerr Dam, 2.4 miles upstream from Allens Creek, 5.3 miles upstream from bridge on U.S. Highway 1, 6.7 miles southeast of Boydton, Mecklenburg County, and at mile 178.4.

Drainage area.--7,780 sq mi, approximately.

Records available.--November 1921 to August 1923 (gage heights only), April 1947 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 196.72 ft above mean sea level (Corps of Engineers bench mark). November 1921 to August 1923 at site 0.3 mile upstream at different datum. April 1947 to Sept. 30, 1952, at site 2,800 ft downstream at datum 0.38 ft higher.

Average discharge.--13 years (1947-60), 7,694 cfs (adjusted for storage).

Extremes.--1947-60: Maximum discharge, 76,000 cfs Dec. 7, 1948 (gage height, 14.97 ft); minimum, 99 cfs July 3, Oct. 24, 1953 (gage height, 1.53 ft); minimum daily, 140 cfs Oct. 7, 1956.

Flood in August 1940 reached a stage of 33.9 ft, from levels by Corps of Engineers.

Remarks.--Since August 1950, flow regulated by Philpott Reservoir on Smith River and by John H. Kerr Reservoir. Records of chemical analyses for the periods October 1951 to September 1952, October 1954 to September 1955 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4,788	4,126	10,230	5,191	9,440	10,160	15,290	5,923	7,869	4,455	3,229	2,007	6,866
1952	1,742	3,908	10,878	11,003	13,154	20,535	9,750	9,806	4,243	2,026	3,297	5,900	8,006
1953	2,479	4,436	4,349	11,370	6,432	11,860	9,746	4,663	3,793	5,535	4,022	3,710	5,767
1954	2,841	2,264	3,458	5,988	6,611	6,803	6,608	5,642	2,977	3,904	3,405	3,692	4,659
1955	5,153	5,736	7,245	5,320	3,423	10,430	11,860	7,428	5,697	5,494	12,040	6,490	7,221
1956	5,235	4,585	4,506	4,102	3,995	4,281	5,871	5,958	3,134	3,298	3,939	3,551	4,374
1957	4,282	5,122	4,946	4,538	12,110	7,364	12,860	6,368	5,820	3,604	3,784	6,663	6,396
1958	6,089	7,824	14,140	10,940	10,240	10,380	17,920	19,520	7,204	5,715	5,586	5,191	10,070
1959	4,756	3,666	4,214	6,003	7,340	2,849	10,090	6,320	4,471	3,429	4,912	4,701	5,206
1960	10,480	5,346	8,900	9,921	17,110	17,640	16,500	9,911	6,595	3,845	5,064	5,074	9,690

Monthly and yearly runoff, in inches (adjusted) ^a/_a

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.72	0.59	1.52	0.77	1.27	1.52	2.20	0.86	1.14	0.65	0.47	0.28	11.99
1952	.26	.56	1.65	1.79	1.72	3.08	1.70	1.20	.57	.58	.95	1.18	15.24
1953	.42	1.09	.96	1.84	1.87	2.42	1.16	.78	.69	.33	.26	.17	11.99
1954	.19	.24	.57	1.82	.73	1.46	.91	.83	.52	.36	.22	.07	7.92
1955	.99	.74	1.05	.59	1.31	1.97	1.86	.85	.69	.69	1.90	.40	13.04
1956	.53	.36	.32	.27	1.25	1.18	1.53	.56	.34	.32	.19	.35	7.20
1957	.71	.67	.83	.79	2.32	1.48	1.95	.61	.86	.32	.54	1.08	11.96
1958	.60	1.93	1.57	1.88	1.53	1.87	2.71	2.58	.85	.67	.72	.26	17.17
1959	.37	.36	1.40	1.21	.77	.90	1.64	.56	.43	.51	.31	.66	9.12
1960	2.01	.94	1.28	1.21	3.36	2.26	2.46	1.41	.65	.47	.53	.56	17.14

^a Adjusted for change in storage in Philpott Reservoir since October 1951 and in John H. Kerr Reservoir since October 1950.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30								Calendar year		
		Observed					Adjusted ^a / _a			Observed	Adjusted ^a / _a	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	
		Discharge	Date									
1950	-	-	-	-	-	-	-	-	-	7,664	7,675	13.38
1951	1203	30,000	Apr. 11, 1951	1,700	6,866	6,868	0.883	11.99	6,645	6,660	11.63	
1952	1233	37,500	Dec. 23, 1951	1,400	8,006	8,695	1.12	15.24	7,559	8,696	15.24	
1953	1273	32,300	Mar. 26, 1953	380	5,767	6,877	.884	11.99	5,544	6,038	10.52	
1954	1333	25,100	Sept. 7, 1954	280	4,659	4,545	.584	7.92	5,462	5,566	9.70	
1955	1363	35,300	Apr. 19, Aug. 19-23	185	7,221	7,473	.961	13.04	6,901	6,573	11.47	
1956	1433	35,900	Apr. 17, 1956	152	4,374	4,114	.529	7.20	4,375	4,681	8.20	
1957	1503	42,000	Feb. 4, 1957	140	6,396	6,852	.881	11.96	7,552	7,940	13.85	
1958	1553	40,400	Dec. 13, Apr. 15	180	10,070	9,842	1.27	17.17	8,768	8,708	15.20	
1959	1623	39,600	May 29, 1959	168	5,206	5,231	.672	9.12	6,245	6,435	11.22	
1960	1703	40,400	Dec. 22, 1959	205	9,690	9,802	1.26	17.14	-	-	-	

^a Adjusted for change in storage in Philpott Reservoir since October 1951 and in John H. Kerr Reservoir since October 1950.

801. Roanoke Rapids Lake at Roanoke Rapids, N. C.

Location.--Lat 36°29', long 77°40', on Roanoke River, 1½ miles upstream from bridge on State Highway 48 and 2¼ miles north of Roanoke Rapids, Halifax County.

Drainage area.--8,395 sq mi.

Records available.--June 1955 to September 1960.

Gage.--Water-stage recorder. Datum of gage is at mean sea level.

Remarks.--Lake used for hydroelectric power development was put in operation June 25, 1955, and has a total capacity of 3,360,220,000 cu ft at normal high-water elevation of 132.0 ft and 3,515,290,000 cu ft at elevation 132.75 ft (top of gates). Figures given herein are total contents. Records not previously published; changes in contents of a group of reservoirs including this one have been published since June 1955.

Cooperation.--Records furnished by Virginia Electric and Power Co.

Contents, in millions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1955	-	-	-	-	-	-	-	-	1,880	2,808	3,252	2,844	-
1956	2,826	3,008	3,252	3,216	3,180	3,467	2,972	3,338	3,198	3,122	2,990	-	-
1957	3,295	3,102	2,208	3,274	3,122	3,216	3,082	2,990	3,295	3,295	3,403	2,680	-
1958	3,044	2,879	2,531	3,008	3,382	2,680	2,861	3,082	2,898	3,082	3,416	2,879	-
1959	3,216	3,338	2,760	3,198	3,317	2,697	2,826	3,044	3,252	3,162	3,122	2,445	-
1960	3,446	3,008	2,935	3,382	3,216	3,198	3,162	2,879	3,180	3,044	3,338	3,008	-

805. Roanoke River at Roanoke Rapids, N. C.

Location.--Lat 36°28', long 77°38', on right bank 1½ miles downstream from bridge on State Highway 48 (revised) at Roanoke Rapids, Halifax County, 2½ miles upstream from Chocoyott Creek, 2½ miles downstream from Roanoke Rapids dam, and at mile 133.6.

Drainage area.--8,410 sq mi, approximately.

Records available.--December 1911 to September 1960. Prior to January 1933, published as "at Old Gaston." Records published for both sites February 1930 to December 1932. Gage-height records collected at site of auxiliary gage since November 1890 are contained in reports of U.S. Weather Bureau.

Gage (revised).--Water-stage recorder at present site and datum since February 1930. Datum of gage is 43.84 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Dec. 7, 1911, to Nov. 21, 1921, and Apr. 7 to Dec. 31, 1932, chain gage and Nov. 21, 1921, to Apr. 7, 1932, water-stage recorder, both at site 9 miles upstream at different datum. Since Aug. 6, 1941, auxiliary water-stage recorder 3.6 miles downstream from base gage.

Average discharge.--48 years (1912-60), 8,270 cfs (adjusted for storage).

Extremes.--1911-60: Maximum discharge, 261,000 cfs Aug. 18, 1940 (gage height, 39.0 ft, from floodmarks); minimum, about 250 cfs Dec. 16, 1955; minimum daily, 472 cfs, Sept. 21, 1932.

Flood in November 1877 at Old Gaston reached a stage about 2 ft lower than flood in August 1940, which was 21.5 ft.

Remarks.--Flow regulated since August 1950 by Philpott Reservoir on Smith River and by John H. Kerr Reservoir, and since June 1955 by Roanoke Rapids Lake.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4,922	4,272	10,390	5,345	9,522	10,210	15,540	6,008	7,938	4,598	3,450	2,030	6,994
1952	1,835	4,130	11,400	11,410	14,020	21,020	9,979	10,550	4,658	2,184	3,505	6,074	8,391
1953	2,433	4,901	4,336	11,720	6,837	12,070	9,565	5,031	4,263	3,572	3,970	3,646	6,032
1954	3,014	2,318	4,239	7,825	8,798	7,491	7,237	6,523	2,942	3,924	3,361	3,600	5,087
1955	5,460	5,811	8,096	5,881	4,239	11,570	12,630	8,076	5,414	5,636	13,410	7,582	7,845
1956	6,573	5,100	5,058	4,689	5,148	5,345	6,978	6,730	3,788	4,165	4,317	4,252	5,180
1957	4,690	5,829	6,186	5,156	14,300	8,826	13,990	7,189	6,423	3,741	4,174	7,090	7,231
1958	6,393	8,283	16,420	12,050	11,180	11,920	19,750	21,710	8,057	6,338	6,948	5,584	11,230
1959	5,203	4,144	5,455	6,906	8,355	5,704	11,850	7,032	4,447	3,884	5,208	5,422	5,943
1960	11,270	6,660	9,673	11,050	19,090	19,130	18,060	10,950	6,978	4,560	6,020	6,490	10,800

Yearly discharge, in cubic feet per second, of Roanoke River at Roanoke Rapids, N. C.

Year	WSP	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted a/				Observed	Adjusted a/
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	7,667	7,678	12.40
1951	1203	28,800	Dec. 7, 1950	1,580	6,994	6,996	0.832	11.29	6,806	6,820	11.00
1952	1233	39,000	Dec. 23, 1951	1,480	8,391	9,080	1.08	14.71	7,906	9,043	14.66
1953	1273	31,200	Mar. 26, 1953	689	6,032	7,142	.849	11.52	5,861	6,355	10.25
1954	1333	23,000	Mar. 16, 1954	921	5,087	4,973	.591	8.03	5,910	6,014	9.71
1955	1383	43,200	Aug. 19, 1955	610	7,845	8,190	.974	13.22	7,623	7,401	11.94
1956	1433	20,000	Sept. 27, 1956	501	5,180	4,924	.585	7.96	5,176	5,448	8.81
1957	1503	43,200	Apr. 11, 1957	588	7,231	7,677	.913	12.39	8,446	8,845	14.25
1958	1553	60,700	May 7, 1958	649	11,250	11,010	1.31	17.78	9,855	9,803	15.88
1959	1623	19,500	Apr. 14-15, 1959	602	5,943	5,954	.708	9.61	7,023	7,219	11.65
1960	1703	32,400	Feb. 20, 1960	1,500	10,800	10,930	1.30	17.70	-	-	-

† Corrected.

a Adjusted for change in contents in Philpott and Kerr Reservoirs (furnished by Corps of Engineers) and Roanoke Rapids Lake (furnished by Virginia Electric and Power Co.).

810. Roanoke River near Scotland Neck, N. C.

Location.--Lat 36°12', long 77°23', on right bank 10 ft upstream from bridge on U.S. Highway 258, 1 mile downstream from tributary on right, 3 miles downstream from Bridgers Creek, $\frac{5}{8}$ miles north of Scotland Neck, Halifax County, and at mile 102.5.

Drainage area.--8,700 sq mi, approximately.

Records available.--August 1940 to September 1956. Records for July 1896 to May 1903, published as "at Neal" in Annual Reports 18-22, and WSP 15, 27, 36, 39, 48, 52, 65, 75, 83, and 98 have been found to be unreliable and should not be used.

Gage.--Water-stage recorder. Datum of gage is 5.77 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 19, 1940, wire-weight gage at present site and datum. Auxiliary water-stage recorder 8.9 miles downstream; prior to Jan. 14, 1941, auxiliary staff gage at same site.

Average discharge.--16 years (1940-56), 8,196 cfs (adjusted for storage).

Extremes.--1940-56: Maximum discharge, 260,000 cfs Aug. 19, 1940; maximum gage height, 41.98 ft Aug. 19, 1940; minimum discharge, 750 cfs Nov. 10, 1952.

Maximum stage observed during period June 1930 to July 1940, 35.1 ft Jan. 24, 1936 (from unpublished U.S. Weather Bureau records adjusted to present datum). The following data on major floods (adjusted to present datum) were furnished by the North Carolina State Highway Commission: 1877, about 37.8 ft; March 1912, 36.8 ft; 1919, 34.9 ft; 1924, 32.9 ft.

Remarks.--Flow regulated since August 1950 by Philpott Reservoir on Smith River and by John H. Kerr Reservoir, and since June 1955 by Roanoke Rapids Lake. Records of chemical analyses and water temperatures for the period October 1953 to September 1954 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4,938	4,277	10,590	5,497	9,710	10,600	15,510	6,215	8,117	4,847	3,533	1,996	7,128
1952	1,726	4,157	11,200	11,190	15,770	21,160	10,730	11,560	5,062	2,347	3,680	6,381	8,733
1953	2,545	5,183	4,598	12,260	7,713	12,480	10,760	5,518	4,310	3,604	4,087	3,566	6,380
1954	3,056	2,450	4,399	9,042	9,816	8,043	7,641	7,580	2,964	3,938	3,348	3,603	5,469
1955	5,561	5,911	8,508	6,113	4,406	11,950	12,740	8,675	5,631	5,873	13,590	8,585	8,158
1956	7,155	5,563	5,501	5,099	6,346	6,340	7,469	7,267	3,884	4,258	4,555	4,652	5,673
1957	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted a/				Observed	Adjusted a/
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	-	-	-
1951	1203	-	-	-	1,550	7,128	7,130	0.820	11.15	7,909	7,920
1952	1233	31,900	Dec. 26, 1951	-	1,460	8,733	9,422	1.08	14.74	6,896	6,910
1953	1273	26,400	Mar. 29, 1953	-	750	6,580	7,490	.861	11.68	8,328	9,455
1954	1333	18,900	Jan. 28, 1954	-	900	5,469	5,355	.616	8.38	6,182	6,676
1955	1383	31,900	Aug. 23, 1955	-	1,310	8,158	8,503	.977	13.26	8,009	7,787
1956	1433	18,300	Apr. 19, 1956	-	1,060	5,673	5,417	.623	8.48	-	-
1957	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-

a Adjusted for change in contents in Philpott and John H. Kerr Reservoirs (furnished by Corps of Engineers) and Roanoke Rapids Lake (furnished by Virginia Electric and Power Co.).

815. Tar River near Tar River, N. C.

Location (revised).--Lat 36°11'41", long 78°35'00", on right bank 90 ft upstream from bridge on State Highway 96, 1½ miles upstream from Fishing Creek, 2½ miles east of town of Tar River, Granville County, and 8 miles south of Oxford.

Drainage area.--167 sq mi (revised).

Records available.--October 1939 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder and concrete control with a sharp-crested weir notch. Datum of gage is 287.25 ft (revised) above mean sea level, datum of 1929.

Average discharge.--21 years (1939-60), 159 cfs.

Extremes.--1939-60: Maximum discharge, 13,100 cfs Aug. 18, 1955 (gage height, 18.07 ft); minimum, 0.07 cfs Oct. 14, 1954.

Remarks.--Town of Oxford diverts from 0.5 to 1 cfs for municipal water supply.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	26.5	23.1	137	76.2	144	172	299	60.2	62.9	23.4	16.9	2.49	86.5
1952	1.60	9.90	185	324	302	563	184	101	29.3	105	264	267	196
1953	16.6	369	124	401	418	533	225	77.8	260	15.8	2.36	2.03	202
1954	1.25	1.54	53.7	415	110	361	175	172	215	34.6	10.5	.97	130
1955	24.8	12.3	84.9	46.6	307	327	205	72.7	24.1	80.0	542	70.6	149
1956	119	49.6	33.1	30.7	337	287	277	193	49.3	13.6	5.55	7.60	116
1957	19.2	65.0	147	154	635	258	128	33.8	59.0	6.84	34.1	15.7	126
1958	13.4	164	277	340	342	276	450	464	64.5	59.2	167	8.38	221
1959	7.25	12.7	258	150	236	149	360	50.5	52.3	207	60.2	83.7	133
1960	321	371	267	242	798	493	349	184	30.5	22.5	208	73.5	278

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.18	0.15	0.95	0.53	0.90	1.19	2.00	0.42	0.42	0.16	0.12	0.02	7.04
1952	.01	.07	1.27	2.23	1.95	4.02	1.23	.70	.20	.73	1.82	1.78	16.01
1953	.11	2.46	.86	2.77	2.60	3.68	1.50	.54	1.74	.11	.02	.01	16.40
1954	.009	.01	.37	2.86	.69	2.50	1.17	1.19	1.44	.24	.07	.006	10.56
1955	.17	.08	.59	.32	1.91	2.26	1.37	.50	.16	.55	3.75	.47	12.13
1956	.82	.33	.23	.21	2.18	1.98	1.65	1.33	.33	.09	.04	.05	9.44
1957	.13	.43	1.01	1.06	3.95	1.78	.85	.23	.39	.05	.24	.10	10.22
1958	.09	1.10	1.91	2.35	2.13	1.90	3.21	3.20	.43	.41	1.15	.06	17.94
1959	.05	.09	1.64	1.04	1.48	1.03	2.40	.35	.35	1.43	.42	.56	10.84
1960	2.21	2.48	1.85	1.67	5.16	3.41	2.33	1.27	.20	.15	1.43	.49	22.65

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	109	8.84
1951	1203	1,940	Apr. 3, 1951	0.8	86.5	0.518	7.04	87.3	7.11
1952	1233	7,060	Sept. 1, 1952	.4	196	1.17	16.01	222	16.09
1953	1273	7,500	Nov. 20, 1952	.2	202	1.21	16.40	164	13.36
1954	1333	5,370	June 17, 1954	.4	130	.778	10.56	135	11.01
1955	1383	13,100	Aug. 18, 1955	.10	149	.692	12.13	156	12.67
1956	1433	4,920	Mar. 17, 1956	.3	116	.695	9.44	118	9.63
1957	1503	6,500	Feb. 1, 1957	1.3	126	.754	10.22	145	11.75
1958	1553	4,790	Apr. 6, 1958	2.6	221	1.32	17.94	204	16.62
1959	1623	6,050	Dec. 29, 1958	3.7	133	.796	10.84	192	15.60
1960	1703	4,560	Feb. 19, 1960	5.3	278	1.66	22.65	-	-

818. Cedar Creek near Louisburg, N. C.

Location--Lat 36°03', long 78°20', on downstream end of center pier of bridge on U.S. Highway 401, three-quarters of a mile downstream from Camping Creek, 3.7 miles southwest of Louisburg, Franklin County, and 5.5 miles upstream from mouth.

Drainage area--47.8 sq mi.

Records available--Water years 1954-56 (annual maximum), September 1956 to September 1960. Occasional base-flow measurements, water years 1954-56.

Gage--Water-stage recorder. Datum of gage is 214.93 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. May 28, 1953, to Sept. 1, 1956, crest-stage gage at upstream side of bridge at datum 6.39 ft higher.

Extremes--1953-60: Maximum discharge, 2,240 cfs May 6, 1958 (gage height, 6.96 ft). 1956-60: Minimum discharge, 4.2 cfs Aug. 13, 17, 18, 1957 (gage height, 1.45 ft). Flood in 1935 reached a stage of about 14 ft, from information by North Carolina State Highway Commission.
A discharge of 3.9 cfs was measured on Oct. 8, 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1956	-	-	-	-	-	-	-	-	-	-	-	16.3	-
1957	21.9	33.4	91.5	36.3	118	70.6	40.1	26.0	18.1	10.5	12.5	18.5	41.0
1958	16.3	46.1	82.8	87.3	81.3	94.0	94.0	154	35.2	70.6	101	26.3	74.3
1959	33.2	29.5	90.6	51.2	59.1	56.6	130	56.0	39.2	97.0	39.9	46.9	60.8
1960	84.2	63.8	64.9	68.0	191	121	137	63.6	48.9	29.9	32.1	23.5	76.7

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1956	-	-	-	-	-	-	-	-	-	-	-	0.38	-
1957	0.53	0.78	2.21	0.88	2.57	1.70	0.94	0.63	0.42	0.25	0.30	.43	11.64
1958	.39	1.08	2.00	2.11	1.77	2.27	2.19	3.72	.82	1.70	2.43	.61	21.09
1959	.80	.69	2.18	1.24	1.29	1.37	3.04	1.35	.92	2.34	.96	1.09	17.27
1960	2.03	1.49	1.57	1.64	4.30	2.91	3.19	1.54	1.14	.72	.77	.55	21.85

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-
1954	-	1,980	Jan. 27, 1954	-	-	-	-	-	-
1955	-	2,100	Aug. 18, 1955	-	-	-	-	-	-
1956	-	1,000	Mar. 17, 1956	-	-	-	-	-	-
1957	1503	1,180	Dec. 16, 1956	4.3	41.0	0.858	11.64	40.8	11.59
1958	1553	2,240	May 6, 1958	12	74.3	1.55	21.09	75.0	21.29
1959	1623	2,170	Dec. 29, 1958	16	60.8	1.27	17.27	65.8	18.69
1960	1703	928	Feb. 19, 1960	14	76.7	1.60	21.85	-	-

820. Tar River near Nashville, N. C.

Location.--Lat 35°51'00", long 77°55'50", on left bank 15 ft downstream from Cockrell Bridge on State Highway 58, 5 miles upstream from Sapony Creek, 10 miles south of Nashville, Nash County, and at mile 93.8.

Drainage area.--701 sq mi.

Records available.--October 1928 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 110.96 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Feb. 28, 1935 (corrected), chain and staff gages at same site and datum.

Average discharge.--32 years (1928-60), 762 cfs.

Extremes.--1928-60: Maximum discharge, 16,900 cfs Dec. 3, 1934 (gage height, 20.8 ft); minimum, 7.0 cfs Sept. 7, 1954 (gage height, 1.51 ft); minimum daily, 11 cfs Sept. 20, 1932.

Remarks.--Considerable diurnal fluctuation and some regulation at low flow caused by small mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	244	231	569	410	484	632	1,042	385	504	285	276	78.4	411
1952	87.2	247	603	994	1,232	2,398	813	569	281	299	690	957	764
1953	210	1,052	493	1,365	1,647	1,647	1,079	487	1,609	216	110	92.4	826
1954	94.3	139	590	2,453	867	1,385	1,046	984	543	148	137	36.7	704
1955	111	233	447	517	1,092	1,235	761	335	247	431	1,868	688	662
1956	424	338	267	281	1,287	1,325	1,177	772	421	607	234	163	605
1957	218	370	874	493	2,136	1,368	627	308	305	90.9	175	137	582
1958	176	666	1,437	1,453	1,184	1,570	1,640	2,566	552	599	945	195	1,085
1959	292	247	622	1,008	991	836	1,927	433	351	1,120	375	746	743
1960	1,718	1,204	918	1,002	3,177	1,818	1,852	949	369	519	855	497	1,215

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.40	0.37	0.94	0.67	0.72	1.04	1.66	0.63	0.48	0.47	0.45	0.12	7.95
1952	.14	.39	.99	1.63	1.90	3.94	1.29	.94	.45	.49	1.13	1.52	14.81
1953	.35	1.67	.81	2.25	2.45	2.71	1.72	.80	2.56	.35	.18	.15	16.00
1954	.16	.22	.97	4.03	1.29	2.28	1.66	1.62	.86	.24	.23	.06	13.62
1955	.18	.37	.74	.52	1.62	2.03	1.21	.55	.39	.71	3.07	1.41	12.80
1956	.70	.54	.44	.46	1.98	2.18	1.87	1.27	.67	1.00	.39	.26	11.76
1957	.36	.59	1.44	.81	3.17	2.25	1.00	.51	.49	.15	.29	.22	11.28
1958	.29	1.06	2.56	2.39	1.76	2.58	2.61	4.22	.85	.99	1.55	.31	20.97
1959	.48	.39	1.02	1.66	1.47	1.38	3.07	.71	.56	1.84	.62	1.19	14.39
1960	2.83	1.92	1.51	1.65	4.89	2.99	2.95	1.56	.59	.52	1.41	.79	23.61

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	494	9.58
1951	1203	3,260	Apr. 11, 1951	42	411	0.586	7.95	402	7.76
1952	1233	7,200	Mar. 8, 1952	22	784	1.09	14.81	831	16.12
1953	1273	6,600	Nov. 25, 1952	17	826	1.18	16.00	749	14.52
1954	1353	8,600	Jan. 26, 1954	16	704	1.00	13.62	701	13.56
1955	1383	10,400	Aug. 22, 1955	15	662	.944	12.80	661	13.19
1956	1433	5,870	Mar. 20, 1956	52	605	.863	11.76	642	12.47
1957	1503	7,700	Feb. 5, 1957	20	582	.830	11.28	650	12.60
1958	1553	11,400	May 10, 1958	93	1,083	1.54	20.97	989	19.15
1959	1623	6,230	Jan. 2, 1959	125	743	1.06	14.39	968	18.76
1960	1703	6,140	Feb. 23, 1960	100	1,215	1.73	23.61	-	-

825. Sapony Creek near Nashville, N. C.

Location.--Lat 35°53'10", long 77°54'40", on right bank 275 ft upstream from bridge on county road, 1 mile upstream from mouth and $6\frac{1}{2}$ miles southeast of Nashville, Nash County.

Drainage area.--64.8 sq mi.

Records available.--April 1950 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 100 ft (from topographic map). Prior to July 14, 1953, staff gage and July 14, 1953, to Jan. 19, 1959, wire-weight gage, at bridge 275 ft downstream at same datum.

Average discharge.--10 years (1950-60), 72.0 cfs.

Extremes.--1950-60: Maximum discharge, 2,420 cfs Oct. 25, 1959 (gage height, 14.94 ft); minimum, 0.02 cfs several days in September 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	28.5	31.5	67.2	48.9	48.0	68.8	80.0	15.4	8.99	4.65	16.1	1.74	34.9
1952	.891	6.66	20.7	59.7	142	258	50.3	21.7	7.28	2.32	38.2	22.6	52.4
1953	6.04	76.5	57.0	92.7	182	142	117	25.7	97.1	5.38	3.78	1.23	66.1
1954	1.19	3.54	30.9	342	138	118	103	62.1	7.94	.925	.555	.041	67.2
1955	.050	.643	5.58	12.5	35.3	51.9	35.6	9.30	31.9	36.5	261	235	64.6
1956	29.5	33.3	22.4	32.1	128	154	131	36.3	5.23	82.9	31.7	9.34	57.7
1957	16.1	34.4	63.4	45.1	178	164	36.9	28.2	71.3	2.45	22.1	9.87	55.2
1958	19.6	105	265	187	158	186	129	197	14.1	2.65	56.8	4.15	111
1959	52.5	30.1	81.3	107	125	139	238	18.9	12.6	125	30.9	26.7	82.1
1960	234	74.8	71.4	113	327	168	117	94.3	9.62	70.4	145	151	129

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.51	0.54	1.19	0.87	0.77	1.22	1.38	0.27	0.15	0.08	0.29	0.03	7.30
1952	.02	.11	.37	1.06	2.36	4.59	.87	.39	.13	.04	.68	.39	11.01
1953	.11	1.32	1.01	1.65	2.92	2.52	2.01	.46	1.67	.10	.07	.02	13.86
1954	.02	.06	.55	6.08	2.22	2.10	1.77	1.10	.14	.02	.01	.0007	14.07
1955	.0009	.01	.10	.22	.57	.92	.61	.17	.55	.65	4.65	5.07	13.52
1956	.52	.57	.40	.57	2.13	2.73	2.25	.65	.09	1.47	.56	.16	12.10
1957	.29	.59	1.13	.80	2.87	2.91	.63	.50	1.23	.04	.39	.17	11.56
1958	.35	1.80	4.72	3.32	2.55	3.32	2.23	3.50	.24	.05	1.01	.07	23.16
1959	.93	.52	1.45	1.91	2.00	2.47	†4.10	.54	.22	2.25	.55	.46	17.20
1960	4.17	1.29	1.27	2.01	5.44	2.99	2.01	1.68	.17	1.25	2.58	2.26	27.12

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	1273	-	-	-	-	-	-	-	-
1951	1273	a316	Apr. 11, 1951	0.10	34.9	0.539	7.30	26.6	5.56
1952	1273	1,350	Mar. 5, 1952	.2	52.4	.809	11.01	61.6	12.95
1953	1273	970	Apr. 14, 1953	.04	66.1	1.02	13.86	57.5	12.05
1954	1333	2,200	Jan. 24, 1954	.02	67.2	1.04	14.07	64.7	13.55
1955	1383	2,190	Sept. 4, 1955	.03	64.6	.997	13.52	71.2	14.90
1956	1433	980	Mar. 18, 1956	.4	57.7	.890	12.10	60.1	12.63
1957	1503	652	Feb. 28, 1957	.1	55.2	.852	11.56	78.4	16.41
1958	1553	1,820	May 8, 1958	.5	111	1.71	23.16	91.6	19.19
1959	1623	785	July 29, 1959	.5	82.1	1.27	17.20	100	21.03
1960	1703	2,420	Oct. 25, 1959	.25	129	1.99	27.12	-	-

a Maximum observed.

829.5. Little Fishing Creek near White Oak, N. C.

Location.--Lat 36°11', long 77°53', on right bank 8 ft downstream from bridge on paved road, 1 mile west of White Oak, Halifax County, 1½ miles upstream from Powells Creek, 4 miles upstream from mouth, and 12 miles west of Enfield.

Drainage area.--175 sq mi.

Records available.--October 1959 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 116.44 ft above mean sea level (unadjusted).

Extremes.--Maximum discharge during year, 3,140 cfs (revised) July 31 (gage height, 16.00 ft); minimum, 17 cfs July 24, 25 (gage height, 1.59 ft).

Flood in July 1959 reached a stage of 19.3 ft, from floodmarks (discharge not determined).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	390	237	259	238	738	391	362	140	77.1	202	236	202	288

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	2.57	1.51	1.71	1.56	4.55	2.58	2.31	0.92	0.49	1.33	1.55	1.29	22.37

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1960	1703	*3,140	July 31, 1960	18	288	1.65	22.37	-	-

* Revised.

830. Fishing Creek near Enfield, N. C.

Location.--Lat 36°09', long 77°42', on right bank 15 ft downstream from bridge on U.S. Highway 301, 2,000 ft downstream from Atlantic Coast Line Railroad bridge, 2 miles southwest of Enfield, Halifax County, 4 $\frac{1}{2}$ miles downstream from Rocky Creek, and at mile 27.7.

Drainage area.--521 sq mi.

Records available.--October 1923 to September 1960. Figures of daily discharge below 250 cfs Oct. 1, 1923, to July 3, 1924, below 350 cfs May 30, 1925, to May 31, 1926, below 150 cfs June 1 to Nov. 16, 1926, and below 100 cfs Nov. 17, 1926, to Sept. 30, 1928, published in WSP 622, 642, and 662 have been found subject to considerable error and should not be used. Gage-height records collected at site 2,000 ft upstream at different datum July 1, 1910, to Apr. 30, 1914, and at present site and datum since May 1, 1914, are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 76.26 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 28, 1932, staff gage at same site and datum.

Average discharge.--37 years (1923-60), 511 cfs.

Extremes.--1923-60: Maximum discharge, 12,600 cfs Dec. 2, 1934, Aug. 18, 1940; maximum gage height, 17.72 ft Aug. 18, 1940; minimum discharge, 10 cfs Oct. 19, 1933, Sept. 21, 1954.

The flood of Apr. 19, 1910, reached a stage of 20.1 ft, present datum (from flood-marks of Atlantic Coast Line Railroad Co.) at site 2,000 ft upstream. Flood of July 24, 1919, reached a stage of 19.6 ft (discharge, 20,300 cfs).

Remarks.--Slight diurnal fluctuation and some regulation at low flow caused by mills above station. Records of water temperatures for the period October 1953 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	240	200	429	295	342	448	592	180	178	114	158	53.7	269
1952	52.4	167	328	651	824	1,472	656	371	185	154	738	431	502
1953	165	630	401	755	1,108	993	765	371	774	131	78.5	65.6	514
1954	57.6	110	395	1,833	757	889	597	805	305	61.9	62.5	21.2	492
1955	29.3	81.8	168	157	445	730	368	161	269	220	747	732	341
1956	255	224	215	245	874	859	815	529	324	331	271	121	420
1957	269	272	929	458	1,537	907	412	184	125	81.2	83.3	91.0	440
1958	86.4	324	1,060	889	769	1,203	1,065	2,174	323	414	877	189	784
1959	235	238	595	807	684	681	1,427	275	136	1,001	240	411	560
1960	1,247	696	720	672	2,145	1,131	1,074	456	233	367	761	609	838

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.53	0.43	0.95	0.65	0.68	0.99	1.27	0.40	0.38	0.25	0.35	0.11	6.99
1952	.12	.36	.73	1.44	1.71	3.26	1.41	.82	.40	.34	1.63	.92	13.14
1953	.36	1.35	.89	1.67	2.21	2.20	1.64	.82	1.66	.29	.17	.14	13.40
1954	.13	.24	.87	4.06	1.51	1.97	1.28	1.78	.85	.14	.14	.05	12.92
1955	.06	.18	.37	.35	.89	1.62	.79	.36	.58	.49	1.65	1.57	8.91
1956	.57	.48	.48	.54	1.81	1.90	1.74	1.17	.69	.73	.60	.26	10.97
1957	.59	.58	2.06	1.03	3.07	2.01	.88	.41	.27	.18	.18	.19	11.45
1958	.19	.69	2.35	1.97	1.54	2.66	2.27	4.81	.69	.92	1.94	.40	20.43
1959	.52	.51	1.32	1.79	1.37	1.51	3.06	.61	.29	2.22	.53	.88	14.61
1960	2.76	1.49	1.59	1.49	4.44	2.50	2.30	1.01	.50	.81	1.68	1.31	21.88

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	-	317	8.25
1951	1203	2,030	Apr. 10, 1951	41	269	0.516	6.99	241	6.29	
1952	1233	5,050	Mar. 6, 1952	40	502	.964	13.14	556	14.53	
1953	1273	3,390	Nov. 23, 1952	25	514	.987	13.40	462	12.04	
1954	1338	6,340	Jan. 24, 1954	10	492	.944	12.82	468	12.18	
1955	1393	3,850	Aug. 20-21, 1955	14	341	.655	8.91	376	9.92	
1956	1435	3,510	Mar. 19, 1956	46	420	.806	10.97	487	12.67	
1957	1503	5,500	Feb. 4, 1957	25	440	.845	11.45	440	11.45	
1958	1553	12,000	May 9, 1958	53	784	1.50	20.43	750	19.55	
1959	1623	5,180	July 17, 1959	64	560	1.07	14.61	694	18.10	
1960	1703	4,430	July 31, 1960	65	838	1.61	21.88	-	-	

835. Tar River at Tarboro, N. C.

Location.--Lat 35°53'40", long 77°32'00", near right bank on downstream end of pier of bridge on U.S. Highway 64 in Tarboro, Edgecombe County, 6½ miles downstream from Fishing Creek and at mile 46.2.

Drainage area.--2,140 sq mi, approximately.

Records available.--July 1896 to December 1900, October 1931 to September 1960. Gage-height records at various datums collected at same site since 1905 are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 10.37 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 1896 to December 1900 chain gage at Atlantic Coast Line Railroad bridge 600 ft downstream at different datum. Oct. 1 to Dec. 8, 1931, chain gage at site 100 ft upstream at present datum.

Average discharge.--33 years (1896-1900, 1931-60), 2,327 cfs.

Extremes.--1896-1900, 1931-60: Maximum discharge, 37,200 cfs Aug. 20, 1940 (gage height, 31.77 ft); minimum, 36 cfs Oct. 17, 22, 1933 (gage height, 0.45 ft).

Maximum stage known, 34.0 ft, present datum, July 27, 1919, from floodmarks (discharge, 52,800 cfs, from rating curve extended above 38,000 cfs).

Remarks.--Some diurnal fluctuation at low flow caused by mills above station. Town of Henderson diverted from 1 to 3 cfs out of the basin above station. Town of Tarboro diverted from 0.8 to 1.4 cfs for municipal supply. Records of chemical analyses and water temperatures for the period October 1953 to September 1954 and suspended-sediment loads for the period October 1957 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	820	669	1,565	1,275	1,419	1,830	2,563	851	746	663	819	204	1,117
1952	170	608	1,258	2,342	4,262	8,371	2,179	1,738	767	589	2,813	1,942	2,252
1953	525	2,234	1,709	3,270	5,014	4,576	3,049	1,460	3,228	903	400	222	2,193
1954	281	350	1,620	8,074	4,258	3,942	3,243	3,135	1,213	305	295	102	2,229
1955	148	330	753	666	1,894	3,236	1,569	713	1,037	1,559	5,394	6,175	1,952
1956	1,290	983	899	1,015	4,207	4,573	4,088	2,020	945	1,731	1,151	580	1,948
1957	977	1,556	3,054	1,752	6,719	5,447	1,917	743	1,108	271	397	414	2,000
1958	487	1,596	5,936	5,257	4,085	5,630	5,135	8,411	1,437	1,450	2,823	1,400	3,647
1959	1,356	1,064	1,555	4,430	3,699	3,271	7,060	1,244	727	3,457	1,597	2,140	2,623
1960	6,591	3,683	3,135	3,382	10,120	5,688	4,540	2,202	919	999	3,998	3,718	4,057

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.44	0.35	0.84	0.69	0.69	0.99	1.34	0.48	0.39	0.36	0.44	0.11	7.10
1952	.09	.32	.68	1.26	2.15	4.51	1.14	.94	.40	.32	1.52	1.01	14.34
1953	.28	1.16	.92	1.76	2.44	2.47	1.59	.79	1.68	.49	.22	.12	13.92
1954	.15	.18	.87	4.35	2.07	2.12	1.69	1.69	.63	.16	.16	.05	14.12
1955	.08	.17	.41	.36	.92	1.74	.82	.38	.54	.84	2.90	3.22	12.38
1956	.69	.51	.48	.55	2.12	2.46	2.13	1.09	.49	.93	.62	.30	12.37
1957	.53	.81	1.65	1.94	3.27	2.93	1.00	.40	.58	.15	.21	.22	12.69
1958	.26	.83	3.20	2.83	1.99	3.03	2.68	4.53	.75	.78	1.52	.73	23.13
1959	.73	.56	.84	2.39	1.80	1.76	3.68	.67	.38	1.86	.86	1.12	16.64
1960	3.55	1.92	1.69	1.82	5.10	3.06	2.37	1.19	.48	.54	2.15	1.94	25.81

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,353	8.58
1951	1203	6,250	Apr. 18, 1951	127	1,117	0.522	7.10	1,031	6.56
1952	1233	17,600	Mar. 9, 1952	108	2,252	1.05	14.34	2,453	15.61
1953	1273	9,950	Feb. 20, 1953	115	2,193	1.02	13.92	2,010	12.76
1954	1333	23,600	Jan. 27, 1954	59	2,229	1.04	14.12	2,143	13.58
1955	1383	16,600	Aug. 25, 1955	49	1,952	.912	12.38	2,115	13.40
1956	1433	13,000	Mar. 22, 1956	229	1,948	.910	12.37	2,151	13.68
1957	1503	15,500	Feb. 8, 1957	122	2,000	.935	12.69	2,206	13.99
1958	1553	26,900	May 12, 1958	212	3,647	1.70	23.13	3,305	20.96
1959	1623	14,000	Jan. 4, 1959	317	2,623	1.25	16.64	3,417	21.68
1960	1703	15,500	Oct. 28, 1959	290	4,057	1.90	25.81	-	-

838. Constoe Creek near Bethel, N. C.

Location.--Lat 35°46'30", long 77°27'40", on right bank 5 ft downstream from bridge on county road, 5½ miles downstream from Crisp Creek, and 5½ miles west of Bethel, Pitt County.

Drainage area.--78.1 sq mi.

Records available.--December 1956 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 30 ft (from topographic map).

Extremes.--1956-60: Maximum discharge, 2,130 cfs Sept. 14, 1960 (gage height, 15.00 ft); minimum, 2.5 cfs Aug. 12, 14, 30, 1957.

Flood in 1955 reached a stage of 16.7 ft, from information by local resident (discharge not determined).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	44.9	50.2	187	227	46.6	16.9	57.9	8.53	6.35	17.8	-
1958	37.5	94.0	218	213	158	187	154	186	29.5	18.7	255	35.5	132
1959	180	71.4	81.6	106	177	139	282	27.8	11.3	93.4	70.5	31.1	105
1960	118	104	138	157	327	171	93.4	93.5	33.2	71.7	147	329	148

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	0.66	0.74	2.49	3.35	0.67	0.25	0.83	0.13	0.09	0.25	-
1958	0.55	1.34	3.22	3.14	2.11	2.76	2.20	2.74	.42	.28	3.77	.51	23.04
1959	2.65	1.02	1.20	1.57	2.36	2.06	4.02	.41	.16	1.38	1.04	.44	18.31
1960	1.75	1.49	2.04	2.32	4.52	2.52	1.33	1.38	.47	1.06	2.17	4.69	25.74

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1957	1503	a500	Mar. 20, June 9	2.9	-	-	-	80.0	13.91
1958	1553	998	Aug. 29, 1958	8.0	132	1.69	23.04	131	22.80
1959	1623	747	Oct. 6, 1958	6.1	105	1.34	18.31	108	18.72
1960	1703	2,130	Sept. 14, 1960	9.3	148	1.90	25.74	-	-

a Maximum during period December to September.

845. Herring Run near Washington, N. C.

Location (revised).--Lat 35°34'03", long 77°01'09", on left bank 10 ft downstream from bridge on county road, 400 ft upstream from Pineywood Branch, $1\frac{1}{4}$ miles upstream from mouth, $1\frac{1}{2}$ miles upstream from bridge on U.S. Highway 264, and $2\frac{1}{4}$ miles northeast of Washington, Beaufort County.

Drainage area.--About 15 sq mi.

Records available.--Occasional low-flow measurements in 1949. January 1950 to September 1960.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 2 ft (from topographic map). Prior to May 8, 1951, staff gage at same site and datum.

Average discharge.--10 years (1950-60), 8.56 cfs.

Extremes.--1950-60: Maximum discharge, 548 cfs Sept. 19, 1955 (gage height, 14.77 ft, from floodmark), from rating curve extended above 330 cfs by logarithmic plotting; minimum, 0.7 cfs at times in several years.
Flood in 1946 reached a stage of 17 ft, from information by local resident (discharge not determined).

Remarks.--Natural runoff affected by ditches and canals above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.41	0.99	1.59	2.99	4.34	5.37	5.15	1.66	3.66	9.92	1.98	0.87	3.33
1952	.810	1.70	1.12	1.77	8.21	17.7	3.98	2.37	2.71	1.04	1.53	1.90	3.72
1953	.88	2.71	2.45	9.46	19.0	13.9	4.84	4.03	2.70	1.86	3.84	3.93	5.71
1954	2.09	2.32	9.20	24.8	9.80	10.5	16.0	5.19	1.46	1.53	.99	.83	7.07
1955	.91	.75	.91	1.15	1.13	1.40	.98	1.05	3.58	15.9	47.8	75.6	12.6
1956	11.5	4.58	3.46	7.04	23.4	13.1	11.0	3.33	1.17	14.2	7.74	1.50	8.46
1957	12.5	12.7	3.71	4.09	17.2	40.9	11.7	2.55	2.58	.90	.75	2.48	9.30
1958	2.66	5.56	14.4	21.9	15.5	22.0	16.7	11.2	2.76	1.80	2.85	1.90	9.93
1959	4.41	1.65	5.06	6.48	13.2	25.3	30.1	3.95	2.50	26.4	4.35	4.81	10.7
1960	5.22	5.00	15.4	24.4	53.5	18.9	12.0	8.35	4.52	3.71	9.06	19.6	14.8

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	1203	-	-	-	-	-	-	8.10	-
1951	1203	271	June 27, 1951	0.7	3.33	-	-	3.29	-
1952	1233	145	Mar. 4, 1952	.7	3.72	-	-	3.92	-
1953	1273	139	Sept. 27, 1953	.8	5.71	-	-	6.36	-
1954	1333	120	Jan. 16, 1954	.8	7.07	-	-	6.14	-
1955	1383	548	Sept. 19, 1955	.7	12.6	-	-	14.0	-
1956	1433	190	July 10, 1956	.9	8.46	-	-	9.24	-
1957	1503	110	Mar. 8, 1957	.7	9.30	-	-	8.78	-
1958	1553	95	Feb. 26, 1958	.8	9.93	-	-	8.96	-
1959	1623	208	Mar. 6, 1959	.7	10.7	-	-	11.9	-
1960	1703	334	Sept. 12, 1960	.9	14.8	-	-	-	-

850. Eno River at Hillsboro, N. C.

Location.--Lat 36°04', long 79°06' (corrected) on right bank 1,000 ft downstream from bridge on State Highway 86, at Hillsboro, Orange County, and 2 miles downstream from Sevenmile Creek.

Drainage area.--66.5 sq mi.

Records available.--October 1927 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder and sharp-crested weir. Datum of gage is 487.44 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 29, 1937, staff gage at same site and datum with natural control.

Average discharge.--33 years (1927-60), 65.1 cfs.

Extremes.--1927-60: Maximum discharge, 11,000 cfs Sept. 18, 1945 (gage height, 20.01 ft), from rating curve extended above 6,000 cfs by logarithmic plotting; minimum, 0.1 cfs Sept. 5, 1953, Oct. 6-14, 1954.

Remarks.--Diversion of 0.25 to 0.4 cfs for Hillsboro water supply is partly returned above station as sewage.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	13.6	10.8	52.5	37.4	47.0	73.0	121	26.1	17.5	23.1	6.00	4.28	35.9
1952	2.97	8.75	96.8	95.0	118	248	107	49.9	37.2	17.9	36.7	40.2	71.6
1953	13.6	128	64.7	144	169	184	72.1	29.2	34.8	9.37	3.66	2.58	70.6
1954	2.74	3.79	12.1	125	28.4	82.2	58.1	42.6	16.6	5.78	2.05	.28	31.8
1955	22.6	29.8	54.3	26.9	99.5	58.4	71.8	38.6	10.0	23.7	92.8	66.5	49.2
1956	21.7	17.8	13.3	14.5	94.1	89.2	79.6	61.1	32.2	10.6	10.6	28.3	39.1
1957	67.0	35.8	58.0	75.4	191	116	90.1	32.7	20.5	7.33	29.7	38.0	62.6
1958	34.6	99.8	85.5	147	121	89.0	189	113	31.8	25.0	11.4	3.87	78.9
1959	4.94	6.44	47.7	42.8	79.9	57.2	131	28.0	27.8	27.8	15.1	17.5	40.1
1960	125	75.6	79.9	92.5	273	200	169	98.5	26.5	25.9	92.9	41.8	108

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.24	0.18	0.91	0.65	0.74	1.27	2.04	0.45	0.29	0.40	0.10	0.07	7.34
1952	.05	.15	1.68	1.65	1.92	4.31	1.79	.87	.62	.31	.64	.68	14.67
1953	.24	2.15	1.12	2.50	2.65	3.19	1.21	.51	.58	.16	.06	.04	14.41
1954	.05	.06	.21	2.16	.44	1.42	.97	.74	.28	.10	.04	.005	6.48
1955	.39	.50	.94	.47	1.56	1.01	1.20	.67	.17	.41	1.61	1.12	10.05
1956	.38	.30	.23	.25	1.53	1.55	1.33	1.06	.54	.18	.18	.48	8.01
1957	1.16	.60	1.01	1.31	2.99	2.02	1.51	.57	.34	.13	.52	.64	12.78
1958	.60	1.67	1.48	2.55	1.90	1.54	3.17	1.95	.53	.43	.20	.06	16.08
1959	.09	.11	.83	.74	1.25	.99	2.20	.49	.47	.48	.26	.29	8.20
1960	2.17	1.27	1.38	1.60	4.43	3.47	2.84	1.71	.44	.45	1.61	.70	22.07

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	44.4	9.07
1951	1203	1,570	Apr. 8, 1951	2.0	35.9	0.540	7.34	38.6	7.89
1952	1233	3,880	Mar. 4, 1952	1.6	71.6	1.08	14.67	79.6	16.30
1953	1273	3,000	Mar. 24, 1953	.2	70.6	1.06	14.41	55.0	11.22
1954	1333	1,640	Jan. 22, 1954	.2	31.8	.478	6.48	39.2	7.98
1955	1383	3,530	Aug. 17, 1955	.1	49.2	.740	10.05	44.7	9.13
1956	1433	2,270	Mar. 16, 1956	1.5	39.1	.588	8.01	48.2	9.87
1957	1503	3,120	Feb. 1, 1957	1.0	62.6	.941	12.78	67.5	13.78
1958	1553	2,270	Apr. 6, 1958	1.6	78.9	1.19	16.08	65.5	13.36
1959	1623	1,600	Dec. 28, 1958	3.1	40.1	.603	8.20	58.7	11.99
1960	1703	4,070	May 28, 1960	6.4	108	1.62	22.07	-	-

855. Flat River at Bahama, N. C.

Location (revised).--Lat 36°10'57", long 78°52'44", on right bank half a mile upstream from Lake Michie, 1 $\frac{1}{4}$ miles upstream from highway bridge, 1 $\frac{1}{4}$ miles north of Bahama, Durham County, and 1 $\frac{1}{2}$ miles upstream from Dial Creek.

Drainage area.--150 sq mi.

Records available.--July 1925 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is 346.85 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 22, 1925, staff gage at same site and at datum 0.58 ft lower.

Average discharge.--35 years (1925-60), 144 cfs.

Extremes.--1925-60: Maximum discharge, about 20,000 cfs July 26, 1938 (gage height not determined), computed on basis of records at nearby stations; minimum, 0.37 cfs Sept. 26, 27, 1932 (gage height, 0.23 ft).

Remarks.--Some diurnal fluctuation and infrequent regulation at low flow caused by small mill 5 miles above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	29.6	22.2	106	61.7	123	182	263	42.9	115	53.7	12.3	5.21	84.2
1952	2.97	9.96	189	262	262	556	204	105	41.9	123	201	199	180
1953	24.9	357	148	370	353	435	170	57.9	214	26.9	4.80	3.10	179
1954	2.65	2.06	25.2	254	65.0	295	148	73.5	62.1	35.8	9.38	1.06	81.6
1955	33.8	30.2	87.4	45.2	196	282	198	76.0	22.0	221	420	49.4	139
1956	242	48.5	33.5	28.7	281	223	238	209	50.8	28.4	31.9	28.3	120
1957	66.2	57.9	99.1	135	458	213	230	50.0	41.2	11.0	49.4	19.9	117
1958	26.8	178	180	327	284	202	379	267	51.5	81.9	68.1	9.80	169
1959	10.2	13.0	239	133	215	146	284	56.5	178	61.8	38.9	33.6	117
1960	224	198	242	226	665	424	354	185	39.0	37.3	104	114	233

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.23	0.17	0.82	0.47	0.85	1.40	1.95	0.33	0.86	0.41	0.09	0.04	7.62
1952	.02	.07	1.46	2.01	1.88	4.27	1.52	.80	.31	.94	1.54	1.48	16.30
1953	.19	2.65	1.14	2.84	2.45	3.34	1.26	.44	1.59	.21	.04	.02	16.17
1954	.02	.02	.19	1.96	.45	2.27	1.10	.56	.46	.28	.07	.008	7.39
1955	.26	.22	.67	.35	1.36	2.17	1.48	.58	.16	1.70	3.23	.37	12.55
1956	1.86	.36	.26	.22	2.02	1.71	1.77	1.60	.38	.22	.25	.21	10.86
1957	.51	.43	.76	1.04	3.18	1.64	1.71	.38	.31	.08	.38	.15	10.57
1958	.21	1.33	1.39	2.51	1.83	1.55	2.82	2.05	.38	.63	.52	.07	15.29
1959	.08	.10	1.83	1.02	1.50	1.12	2.11	.43	1.33	.47	.30	.25	10.54
1960	1.72	1.47	1.86	1.74	4.78	3.26	2.63	1.42	.29	.29	.80	.85	21.11

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	88.4	8.02
1951	1203	3,580	Apr. 9, 1951	4.1	84.2	0.561	7.62	88.0	7.95
1952	1233	10,500	Aug. 31, 1952	2.4	180	1.20	16.30	207	18.73
1953	1273	9,500	Nov. 20, 1952	1.2	179	1.19	16.17	137	12.42
1954	1333	4,910	Mar. 14, 1954	.6	81.6	.544	7.39	91.9	8.31
1955	1383	15,300	Aug. 18, 1955	.5	139	.927	12.55	153	13.88
1956	1433	8,100	Oct. 1, 1955	4.3	120	.800	10.86	111	10.08
1957	1503	6,700	Feb. 1, 1957	2.8	117	.780	10.57	130	11.80
1958	1553	5,400	Apr. 11, 1958	5.6	169	1.13	15.29	159	14.37
1959	1623	7,700	Dec. 29, 1959	5.3	117	.780	10.54	150	13.58
1960	1703	5,400	Feb. 18, 1960	9.0	233	1.55	21.11	-	-

NEUSE RIVER BASIN

860. Dial Creek near Bahama, N. C.

Location (revised).--Lat 36°10'36", long 78°51'24", on right bank three-eighths of a mile upstream from mouth and Lake Michie and 1½ miles northeast of Bahama, Durham County.

Drainage area.--4.71 sq mi (revised).

Records available.--October 1925 to September 1960. Prior to October 1929 published as "at Bahama."

Gage.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 357.67 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--35 years (1925-60), 4.40 cfs.

Extremes.--1925-60: Maximum gage height, 7.60 ft May 24, 1940 (discharge not determined); no flow at times in many years.

Correction.--In WSP 622 and 1303, the monthly summary figures for August 1926 and the corresponding annual figures were listed in error; they should be as given herewith:

Month	Mean	Per square mile	Runoff in inches
August 1926,	0.134	0.027	0.03
Water year 1925-26	2.54	.518	7.02
Calendar year 1926	2.79	.569	7.74

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.995	0.909	2.35	1.89	2.91	3.97	7.27	1.42	2.03	1.12	0.375	0.058	2.10
1952	.054	.660	4.85	5.97	6.87	15.2	5.78	2.52	.736	2.76	12.9	4.00	5.21
1953	1.20	7.68	4.02	10.4	10.9	14.2	6.44	2.65	9.10	.956	.229	.238	5.62
1954	.190	.351	1.61	9.56	3.39	11.4	4.56	4.01	1.12	.508	.244	.004	3.10
1955	.581	.578	1.53	1.13	5.69	7.75	5.60	1.96	.858	4.29	8.05	1.36	3.27
1956	3.84	1.96	1.48	1.42	7.65	10.3	6.40	2.89	1.20	.732	.700	.407	3.23
1957	.991	1.62	3.79	5.43	12.7	5.53	6.13	1.55	5.01	.273	2.00	.756	3.75
1958	.839	4.34	6.31	10.2	8.45	6.97	14.7	12.0	1.76	3.94	6.39	.960	6.40
1959	1.17	1.26	8.67	5.05	6.62	5.19	10.1	2.36	5.31	2.86	1.05	3.76	4.43
1960	4.78	9.65	6.58	8.16	18.2	12.9	10.4	5.95	1.46	.886	4.10	1.10	6.96

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.24	0.22	0.58	0.46	0.64	0.97	1.72	0.35	0.48	0.27	0.09	0.01	6.03
1952	.01	.16	1.19	1.46	1.57	3.73	1.37	.62	.17	.68	3.15	.957	15.06
1953	.29	1.82	.98	2.55	2.41	3.47	1.52	.65	2.15	.23	.06	.06	16.19
1954	.05	.08	.39	2.34	.75	2.80	1.08	.98	.27	.12	.06	.0009	8.92
1955	.14	.14	.37	.28	1.26	1.90	1.33	.48	.20	1.05	1.97	.32	9.44
1956	.94	.46	.36	.35	1.75	2.52	1.52	.71	.28	.18	.17	.10	9.34
1957	.24	.38	.95	1.33	2.81	1.35	1.45	.38	1.19	.07	.49	.18	10.80
1958	.21	1.03	1.55	2.49	1.87	1.71	3.48	2.94	.42	.96	1.56	.23	18.45
1959	.29	.30	2.12	1.24	1.46	1.27	2.40	.58	1.26	.70	.28	.89	12.77
1960	1.17	2.29	1.61	2.00	4.17	3.15	2.46	1.46	.35	.22	1.00	.26	20.14

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	3.39	9.75
1951	1203	98	Apr. 5, 1951	0.01	2.10	0.446	6.03	2.21	6.35
1952	1233	728	Aug. 31, 1952	0	5.21	1.11	15.06	5.81	16.79
1953	1273	1,010	June 13, 1953	0	5.62	1.19	16.19	4.73	13.62
1954	1333	284	Mar. 14, 1954	0	3.10	.658	8.92	3.14	9.05
1955	1383	540	Aug. 17, 1955	0	3.27	.694	9.44	3.66	10.55
1956	1433	256	Mar. 16, 1956	0	3.23	.686	9.34	3.16	9.13
1957	1503	377	June 5, 1957	0	3.75	.796	10.80	4.17	12.04
1958	1553	353	Apr. 6, 1958	.44	6.40	1.36	18.45	6.38	18.37
1959	1623	365	Dec. 28, 1958	.24	4.43	.941	12.77	5.25	15.13
1960	1703	331	Aug. 23, 1960	.37	6.96	1.48	20.14	-	-

870. Neuse River near Northside, N. C.

Location.--Lat 36°02'54" (revised), long 78°44'59", on right bank 25 ft upstream from Fish Dam Bridge, 1½ miles downstream from Rocky Creek, 2½ miles downstream from Seaboard Air Line Railway bridge, and 2½ miles south of Northside, Granville County, 8½ miles downstream from confluence of Eno and Flat Rivers, and 9½ miles northeast of Durham, Durham County.

Drainage area.--526 sq mi.

Records available.--July 1927 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 225.91 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 2, 1928, chain gage at site 10 ft upstream at same datum. Since Sept. 29, 1950, auxiliary water-stage recorder at bridge on U.S. Highway 15, 4 miles upstream. Mar. 25, 1949, to Sept. 28, 1950, auxiliary wire-weight gage at same site.

Average discharge.--33 years (1927-60), 534 cfs.

Extremes.--1927-60: Maximum discharge, 36,600 cfs Sept. 18, 1945; maximum gage height, 31.02 ft Sept. 18, 1945, from floodmark; minimum discharge, 3.1 cfs Sept. 20, 1932 (gage height, 0.87 ft).

Remarks.--Moderate diurnal fluctuation caused by powerplant above station. Flow regulated by Durham municipal dam. An average of about 14 cfs was diverted above station for Durham municipal water supply. About 7 cfs was returned as sewage above station and about 5 cfs was diverted into the Cape Fear River basin. Records of chemical analyses for the period October 1955 to September 1956 are published in report of the Geological Survey.

Revisions.--One daily discharge in water year 1948 was revised in WSP 1703; the resulting revised records as summarized herewith supersede those published in WSP 1303.

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
April 1948.....	31,921	4,430	253	1,064	2.02	2.26
Water year 1947-48.....	261,479	11,300	30	714	1.36	18.47
Calendar year 1948.....	295,986	11,300	30	809	1.54	20.92

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	93.8	97.7	344	220	400	538	989	175	233	172	76.2	24.8	279
1952	21.0	41.2	518	814	898	1,948	676	335	119	152	511	762	566
1953	65.8	1042	390	1,395	1,363	1,636	600	219	406	78.1	29.0	43.0	602
1954	20.4	21.4	177	1,361	316	883	600	368	136	60.8	41.0	17.9	337
1955	137	107	279	172	945	730	574	214	61.4	311	956	230	390
1956	438	132	117	81.4	1,065	966	787	562	199	79.2	105	128	385
1957	323	313	499	364	1,859	1,022	526	163	266	45.3	232	195	474
1958	182	686	828	1,218	940	892	1,432	1,113	152	243	221	51.4	662
1959	48.4	42.9	491	467	749	470	1,226	182	324	422	198	291	406
1960	862	839	748	653	2,533	1,649	1,401	606	149	120	444	276	850

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.21	0.21	0.75	0.48	0.79	1.19	2.10	0.38	0.49	0.36	0.17	0.05	7.19
1952	.05	.09	1.14	1.78	1.84	4.27	1.43	.74	.25	.33	1.12	1.62	14.66
1953	.19	2.21	.86	3.06	2.70	3.59	1.27	.48	.86	.17	.06	.09	15.54
1954	.04	.05	.39	2.98	.63	1.93	1.27	.85	.29	.13	.09	.04	8.69
1955	.30	.23	.61	.38	1.87	1.60	1.22	.47	.13	.68	2.10	.49	10.08
1956	.96	.28	.26	.18	2.18	2.12	1.67	1.23	.42	.17	.23	.27	9.97
1957	.71	.66	1.09	.80	3.68	2.24	1.12	.36	.56	.10	.51	.41	12.24
1958	.40	1.46	1.82	2.67	1.86	1.96	3.04	2.44	.32	.53	.43	.11	17.09
1959	.11	.09	1.08	1.02	1.48	1.03	2.60	.40	.69	.92	.43	.62	10.47
1960	1.89	1.78	1.64	1.43	5.19	3.61	2.97	1.33	.32	.26	.97	.58	21.97

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	379	9.79
1951	1203	4,340	Apr. 10, 1951	16	279	0.530	7.19	283	7.30
1952	1233	11,200	Mar. 5, 1952	15	566	1.08	14.66	643	16.64
1953	1273	11,200	Nov. 21, 1952	14	602	1.14	15.54	494	12.76
1954	1333	7,620	Jan. 23, 1954	12	337	.641	8.69	362	9.35
1955	1383	13,200	Aug. 19, 1955	10	390	.741	10.08	404	10.44
1956	1433	7,120	Mar. 17, 1956	28	385	.732	9.97	423	10.93
1957	1503	11,000	Feb. 2, 1957	16	474	.901	12.24	521	13.46
1958	1553	7,780	May 8, 1958	30	662	1.26	17.09	569	14.69
1959	1623	7,120	Dec. 30, 1958	26	406	.772	10.47	562	14.50
1960	1703	7,670	Feb. 20, 1960	39	850	1.62	21.97	-	-

875. Neuse River near Clayton, N. C.

Location.--Lat 35°39', long 78°25', on left bank 5 ft downstream from bridge on State Highway 42, 1.8 miles upstream from Mill Creek, and 3 miles east of Clayton, Johnston County.

Drainage area.--1,140 sq mi, approximately.

Records available.--July 1927 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 128.41 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Mar. 18, 1942, at site 1,100 ft upstream at same datum.

Average discharge.--33 years (1927-60), 1,230 cfs.

Extremes.--1927-60: Maximum discharge, 22,900 cfs Sept. 19, 1945 (gage height, 22.12 ft); minimum, 44 cfs Sept. 15, 1932 (gage height, 0.28 ft, site then in use).
Flood of July 23, 1919, reached a stage of 21.15 ft, from floodmark at former site (discharge, 21,200 cfs).

Remarks.--City of Raleigh diverted a yearly average of 2 to 8 cfs from Swift Creek, a downstream tributary, for municipal water supply; the sewage effluent enters Neuse River above this station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	290	288	679	504	744	988	1,784	458	405	576	301	112	592
1952	108	192	858	1,439	1,859	4,316	1,189	744	299	308	1,035	1,764	1,184
1953	240	1,818	741	2,746	2,818	3,157	1,483	587	1,267	280	163	177	1,278
1954	135	164	796	3,897	1,128	1,981	1,504	1,059	386	237	277	93.7	975
1955	301	290	697	525	1,970	1,334	1,003	407	188	418	2,253	1,695	916
1956	684	438	374	337	2,163	2,113	1,742	1,012	684	419	306	294	874
1957	524	804	1,285	649	3,563	2,231	926	887	745	191	461	408	1,024
1958	557	1,632	2,153	2,599	1,870	2,232	2,674	3,518	655	759	1,164	302	1,679
1959	437	296	951	1,505	1,755	1,262	3,297	680	894	1,575	699	1,053	1,194
1960	2,752	1,746	1,582	1,681	5,709	3,262	3,226	1,525	528	596	1,194	631	2,022

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.29	0.28	0.69	0.51	0.68	1.00	1.75	0.46	0.40	0.58	0.30	0.11	7.05
1952	.11	.19	.87	1.46	1.85	4.36	1.16	.75	.29	.31	1.05	1.73	14.13
1953	.24	1.78	.75	2.78	2.57	3.19	1.45	.59	1.24	.28	.17	.17	15.21
1954	.14	.16	.80	3.94	1.03	2.00	1.47	1.07	.38	.24	.28	.09	11.60
1955	.30	.28	.70	.53	1.80	1.35	.98	.41	.18	.42	2.28	1.66	10.89
1956	.69	.43	.38	.34	2.05	2.14	1.71	1.02	.67	.42	.31	.29	10.45
1957	.53	.79	1.30	.66	3.07	2.26	.91	.90	.73	.19	.47	.40	12.21
1958	.56	1.60	2.18	2.63	1.71	2.26	2.62	3.56	.64	.77	1.18	.30	20.01
1959	.44	.29	.96	1.52	1.60	1.28	3.23	.69	.87	1.59	.71	1.03	14.21
1960	2.78	1.71	1.60	1.70	5.40	3.30	3.16	1.54	.52	.60	1.21	.62	24.14

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	-	807	9.63
1951	1203	4,680	Apr. 12, 1951	78	592	0.519	7.05	584	6.96		
1952	1233	12,900	Mar. 5, 1952	64	1,184	1.04	14.13	1,318	15.73		
1953	1273	8,450	Nov. 25, 1952	59	1,278	1.12	15.21	1,138	13.54		
1954	1333	13,400	Jan. 24, 1954	62	975	.855	11.60	991	11.78		
1955	1383	11,500	Aug. 19, 1955	51	916	.804	10.89	933	11.12		
1956	1433	8,750	Mar. 18, 1956	100	874	.767	10.45	968	11.57		
1957	1503	9,150	Feb. 6, 1957	83	1,024	.898	12.21	1,168	13.93		
1958	1553	13,800	May 8, 1958	218	1,679	1.47	20.01	1,456	17.36		
1959	1623	8,250	Dec. 30, 1958	209	1,194	1.05	14.21	1,563	18.61		
1960	1703	10,900	Oct. 23, 1959	244	2,022	1.77	24.14	-	-		

880. Middle Creek near Clayton, N. C.

Location.--Lat 35°34', long 78°36', on right bank 300 ft downstream from bridge on State Highway 50, a quarter of a mile upstream from Buffalo Branch, $3\frac{1}{4}$ miles downstream from county line, and $9\frac{1}{4}$ miles southwest of Clayton, Johnston County.

Drainage area.--80.7 sq mi.

Records available.--October 1939 to September 1960. Monthly discharge only for October 1939, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 184.53 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--21 years (1939-60), 95.8 cfs.

Extremes.--1939-60: Maximum discharge, 5,400 cfs Sept. 4, 1955 (gage height, 13.14 ft in gage well); no flow Oct. 11-13, 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	27.4	26.6	56.5	50.3	55.4	65.8	92.2	25.3	10.2	11.5	13.8	3.75	36.4
1952	2.60	7.03	19.7	48.1	112	352	80.8	40.0	20.5	18.2	118	238	87.9
1953	35.9	115	81.8	197	247	221	141	50.1	39.0	16.8	11.1	5.35	95.7
1954	3.90	7.66	73.0	356	183	165	135	81.5	19.6	14.9	6.72	6.50	87.0
1955	16.1	19.0	52.5	61.9	117	89.3	78.9	15.0	10.8	26.5	132	436	87.2
1956	54.8	52.7	40.3	38.8	167	189	135	79.8	52.3	41.5	20.2	21.8	74.0
1957	93.5	118	124	70.7	138	182	78.3	80.9	181	22.8	45.5	48.6	98.4
1958	105	226	226	208	206	178	160	330	46.1	38.6	98.1	19.7	153
1959	67.7	44.3	103	111	170	157	319	61.7	85.8	131	78.6	177	125
1960	275	137	105	172	389	234	203	110	27.6	60.5	106	46.7	155

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.39	0.37	0.81	0.72	0.72	0.94	1.27	0.38	0.14	0.16	0.20	0.05	6.13
1952	.04	.10	.28	.69	1.50	5.03	1.12	.57	.28	.26	1.69	3.28	14.84
1953	.51	1.58	1.17	2.81	3.18	3.16	1.95	.72	.54	.24	.16	.07	16.09
1954	.06	.11	1.04	5.08	2.36	2.36	1.87	1.16	.27	.21	.10	.007	14.63
1955	.23	.26	.75	.88	1.51	1.28	1.09	.21	.15	.38	1.89	6.03	14.66
1956	.78	.73	.58	.55	2.23	2.70	1.86	1.14	.72	.59	.29	.30	12.47
1957	1.34	1.63	1.78	1.01	1.79	2.61	1.08	1.16	2.51	.33	.65	.67	16.56
1958	1.50	3.13	3.22	2.97	2.66	2.55	2.21	4.71	.64	.55	1.40	.27	25.81
1959	.97	.61	1.47	1.58	2.20	2.24	4.41	.68	1.19	1.87	1.12	2.44	20.96
1960	3.93	1.89	1.50	2.45	5.20	3.35	2.81	1.57	.38	.86	1.52	.65	26.11

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	53.4	8.99
1951	1203	360	Apr. 9, 1951	1.1	36.4	0.451	6.13	29.6	4.98
1952	1233	4,100	Sept. 1, 1952	.6	87.9	1.09	14.84	105	17.68
1953	1273	1,100	Feb. 16, 1953	.4	95.7	1.19	16.09	83.4	14.04
1954	1333	3,070	Jan. 23, 1954	.1	87.0	1.08	14.63	87.2	14.66
1955	1383	5,400	Sept. 4, 1955	0	87.2	1.08	14.66	92.0	15.51
1956	1433	1,330	Mar. 17, 1956	4.5	74.0	.917	12.47	89.8	15.13
1957	1503	2,030	June 9, 1957	3.6	98.4	1.22	16.56	117	19.66
1958	1553	3,720	May 7, 1958	9.8	153	1.90	25.81	125	21.01
1959	1623	1,760	Sept. 4, 1959	11	125	1.55	20.98	150	25.25
1960	1703	1,690	Oct. 24, 1959	9.2	155	1.92	26.11	-	-

885. Little River near Princeton, N. C.

Location (revised).--Lat 35°30'40", long 78°09'30", on left bank 600 ft downstream from highway bridge, three-quarters of a mile upstream from Little Creek, and 3 miles north of Princeton, Johnston County.

Drainage area.--229 sq mi.

Records available.--February 1930 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 107.75 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 17, 1934, staff gage at same site and datum.

Average discharge.--30 years (1930-60), 256 cfs.

Extremes.--1930-60: Maximum discharge, 6,260 cfs Oct. 25, 1959 (gage height, 13.53 ft); minimum, 1.0 cfs several times in September and October 1932 (gage height, 0.30 ft). Flood in July 1919 reached a stage of 14.57 ft; September 1924, 14.90 ft; September 1928, 13.3 ft; October 1929, 13.47 ft; from information by local resident.

Remarks.--Slight diurnal fluctuation and occasionally some regulation for short periods caused by mills above station. Records of chemical analyses for the periods October 1950 to September 1951, October 1955 to September 1956 and water temperatures for the period October 1955 to September 1956 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	50.0	50.3	102	107	127	191	237	71.7	37.6	66.8	45.2	18.8	91.8
1952	9.7	29.3	63.6	118	323	926	154	103	38.9	21.9	48.4	116	163
1953	35.6	224	153	321	575	523	414	154	573	92.9	26.0	13.2	256
1954	16.4	21.0	162	999	370	451	352	210	46.2	42.0	42.5	9.34	227
1955	7.13	39.1	84.7	96.0	221	166	120	38.7	44.1	78.6	678	905	206
1956	124	102	87.4	104	444	526	359	207	74.1	86.2	153	88.6	195
1957	77.5	149	258	159	452	537	159	153	242	71.3	56.6	41.7	193
1958	111	290	717	681	571	636	513	715	108	170	508	90.2	427
1959	306	135	280	471	593	528	969	135	142	826	237	170	398
1960	1,155	371	307	479	1,206	690	432	355	72.1	337	468	276	511

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.25	0.25	0.51	0.54	0.58	0.96	1.15	0.36	0.18	0.34	0.23	0.09	5.44
1952	.05	.14	.32	.59	1.52	4.66	.75	.52	.19	.11	.24	.56	9.85
1953	.18	1.09	.77	1.61	2.62	2.63	2.02	.78	2.79	.47	.13	.06	15.15
1954	.08	.10	.82	5.03	1.68	2.27	1.71	1.06	.23	.21	.21	.05	13.45
1955	.04	.19	.43	.48	1.01	.84	.59	.19	.21	.40	3.41	4.41	12.20
1956	.62	.50	.44	.52	2.09	2.65	1.75	1.04	.36	.43	.77	.43	11.60
1957	.39	.72	1.30	.80	2.06	2.71	.77	.77	1.18	.36	.18	.20	11.44
1958	.56	1.41	3.61	3.43	2.60	3.20	2.50	3.60	.53	.86	2.56	.44	25.30
1959	1.54	.66	1.41	2.37	2.70	2.66	4.72	.68	.69	4.16	1.19	.83	23.61
1960	5.82	1.81	1.55	2.41	5.68	3.48	2.10	1.79	.35	1.69	2.35	1.34	30.37

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	130	7.69
1951	1203	655	Apr. 10, 1951	12	91.8	0.401	5.44	83.4	4.94
1952	1233	4,110	Mar. 6, 1952	7	163	.712	9.65	188	11.18
1953	1273	2,710	June 16, 1953	7	256	1.12	15.15	238	14.11
1954	1333	4,770	Jan. 24, 1954	2.6	227	.991	13.45	221	13.11
1955	1383	3,350	Sept. 5, 1955	1.9	206	.900	12.20	221	13.10
1956	1433	1,930	Mar. 18, 1956	8.0	195	.852	11.60	210	12.45
1957	1503	1,360	Mar. 2, 1957	5.9	193	.843	11.44	246	14.61
1958	1553	3,980	Aug. 29, 1958	25	427	1.86	25.30	393	23.33
1959	1623	2,820	July 17, 1959	24	398	1.74	23.61	492	29.18
1960	1703	6,260	Oct. 25, 1959	16	511	2.23	30.37	-	-

890. Neuse River near Goldsboro, N. C.

Location.--Lat 35°20'15" long 77°59'50", on left bank at downstream side of highway bridge, 0.2 mile upstream from Stony Creek, 1.5 miles downstream from Atlantic Coast Line Railroad bridge, 3.2 miles south of Wayne County courthouse in Goldsboro, 4.3 miles downstream from Little River, and at mile 135.

Drainage area.--2,390 sq mi, approximately.

Records available.--February 1930 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 42.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 24, 1931, chain gage at railroad bridge 1.5 miles upstream at datum 2.00 ft higher. July 24, 1931, to Aug. 31, 1948, water-stage recorder at site 2.3 miles upstream at datum 1.71 ft higher than present datum.

Average discharge.--30 years (1930-60), 2,521 cfs.

Extremes.--1930-60: Maximum discharge, 30,700 cfs Sept. 23, 1945; maximum gage height, 26.72 ft Sept. 23, 1945, site and datum then in use; minimum discharge, 80 cfs Dec. 3, 1951 (result of temporary closure of river channel upstream); minimum unregulated discharge, 85 cfs Sept. 14, 1932 (gage height, 1.03 ft, site and datum then in use). Maximum discharge known, 38,600 cfs Oct. 5, 1929 (gage height, 27.3 ft, at railroad bridge and present datum).

Remarks.--Records of chemical analyses for the periods October 1954 to September 1955, October 1958 to September 1960 and water temperatures for the period October 1958 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	579	574	1,204	1,147	1,369	1,807	2,884	851	530	1,073	607	218	1,070
1952	162	363	1,088	1,651	3,819	8,768	2,543	1,614	566	421	1,706	2,597	2,105
1953	580	2,332	2,052	4,146	5,752	5,450	3,739	1,705	2,719	716	293	223	2,451
1954	246	265	1,416	6,699	4,450	4,130	4,044	1,984	682	606	370	136	2,075
1955	330	388	1,152	1,179	3,101	2,554	1,735	679	406	943	6,745	8,016	2,258
1956	1,681	1,173	1,006	1,102	3,972	4,555	3,557	2,229	1,043	966	1,018	991	1,933
1957	1,394	2,011	2,415	1,489	4,778	5,668	2,030	1,567	2,004	473	635	640	2,075
1958	1,370	2,158	6,489	5,401	4,881	5,224	5,839	7,046	1,491	1,458	1,829	1,195	3,700
1959	1,593	908	1,264	4,136	4,885	4,351	8,301	1,689	1,678	4,421	2,206	2,461	3,159
1960	5,959	3,805	3,739	4,378	10,660	6,961	5,456	2,782	1,211	1,555	3,964	2,522	4,395

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.28	0.27	0.59	0.55	0.61	0.87	1.35	0.41	0.25	0.52	0.29	0.10	6.08
1952	.08	.17	.52	.80	1.72	4.23	1.19	.78	.26	.20	.82	1.21	11.98
1953	.28	1.09	.99	2.00	2.51	2.63	1.75	.82	1.27	.35	.14	.10	13.93
1954	.12	.12	.68	3.23	1.94	1.99	1.89	.96	.32	.29	.18	.06	11.78
1955	.16	.18	.56	.57	1.35	1.23	.81	.33	.19	.45	3.25	3.74	12.82
1956	.81	.55	.49	.53	1.79	2.20	1.66	1.08	.49	.47	.49	.46	11.02
1957	.87	.94	1.17	.72	2.08	2.73	.95	.76	.94	.23	.51	.30	11.80
1958	.66	1.01	3.13	2.61	2.13	2.52	2.73	3.40	.70	.70	.88	.56	21.03
1959	.77	.42	.61	2.00	2.13	2.10	3.88	.91	.78	2.13	1.06	1.15	17.94
1960	2.67	1.78	1.60	2.11	4.81	3.36	2.55	1.34	.57	.75	1.91	1.18	25.03

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	-	-	8.57
1951	1203	5,680	Apr. 15, 1951	162	1,070	0.448	6.08	1,510	1,007	5.72
1952	1233	17,300	Mar. 11, 1952	114	2,105	.681	11.98	2,304	2,304	13.57
1953	1273	9,300	Feb. 23, 1953	105	2,451	1.02	13.93	2,199	2,199	12.49
1954	1333	21,400	Jan. 28, 1954	101	2,075	.868	11.78	2,070	2,070	11.76
1955	1383	23,200	Sept. 8, 1955	95	2,258	.945	12.82	2,425	2,425	13.77
1956	1433	10,600	Mar. 24, 1956	301	1,933	.809	11.02	2,096	2,096	11.95
1957	1503	10,600	Mar. 8, 1957	156	2,075	.868	11.80	2,451	2,451	13.82
1958	1553	16,500	May 13, 1958	516	3,700	1.55	21.03	3,173	3,173	18.03
1959	1623	13,000	Apr. 27, 1959	444	3,159	1.32	17.94	3,978	3,978	22.59
1960	1703	14,200	Oct. 30, 1959	420	4,595	1.84	25.03	-	-	-

895. Neuse River at Kinston, N. C.

Location.--Lat 35°15'30", long 77°35'10", on left bank at Kinston, Lenoir County, 600 ft downstream from bridge on State Highway 11 and at mile 90.

Drainage area.--2,690 sq mi, approximately.

Records available.--February 1930 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 10.90 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 25, 1934, chain gage at highway bridge 1 mile downstream at datum 0.80 ft lower.

Average discharge.--30 years (1930-60), 2,884 cfs.

Extremes.--1930-60: Maximum discharge, 25,900 cfs Sept. 27, 1945; maximum gage height, 22.44 ft Sept. 27, 1945; minimum discharge, 124 cfs Sept. 26, 1932 (gage height, 1.29 ft, site and datum then in use).
Maximum stage known 25.0 ft July 1919, present site and datum (discharge about 39,000 cfs), from information by North Carolina State Highway Commission. Flood of Oct. 9, 10, 1929, reached a stage of 22.48 ft (discharge, 28,000 cfs), from information by North Carolina State Highway Commission.

Remarks.--Records of chemical analyses for the periods January 1955 to September 1956, October 1958 to September 1960 and water temperatures for the period January 1955 to September 1956, are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	742	727	1,413	1,356	1,532	1,982	2,911	1,018	607	1,275	764	300	1,217
1952	258	597	1,225	1,775	3,901	8,965	3,160	2,011	688	512	1,745	2,508	2,276
1953	689	1,792	2,640	3,924	5,744	5,921	4,105	1,969	2,842	850	561	267	2,571
1954	356	345	1,552	5,423	6,101	4,571	4,474	2,190	897	730	470	212	2,254
1955	361	446	1,223	1,215	3,105	2,720	1,791	756	449	962	6,042	10,580	2,456
1956	2,144	1,388	1,217	1,235	4,320	4,659	3,862	2,678	1,254	1,204	1,284	1,050	2,200
1957	1,731	2,290	2,553	1,777	4,923	6,200	2,331	1,644	2,171	552	653	785	2,284
1958	1,608	2,126	7,647	6,165	5,930	5,810	6,973	7,647	1,890	1,725	1,722	1,638	4,238
1959	2,005	1,275	1,476	4,667	5,428	5,217	8,463	2,915	1,815	4,652	2,912	2,699	3,613
1960	5,133	5,127	4,336	5,099	10,980	7,886	6,356	3,151	1,682	1,714	5,178	3,596	4,996

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.32	0.30	0.61	0.58	0.59	0.85	1.21	0.44	0.25	0.55	0.33	0.12	6.15
1952	.11	.25	.52	.76	1.56	3.84	1.31	.86	.29	.22	.75	1.04	11.51
1953	.30	.74	1.13	1.68	2.22	2.54	1.70	.84	1.18	.36	.16	.11	12.96
1954	.15	.14	.67	2.32	2.36	1.96	1.86	.94	.37	.31	.20	.09	11.37
1955	.15	.18	.52	.52	1.20	1.17	.74	.32	.19	.41	2.59	4.39	12.38
1956	.92	.58	.52	.53	1.73	2.08	1.60	1.15	.52	.52	.55	.44	11.14
1957	.74	.95	1.09	.76	1.91	2.66	.97	.70	.90	.24	.28	.33	11.53
1958	.69	.88	3.28	2.64	2.30	2.49	2.89	3.28	.78	.74	.74	.68	21.39
1959	.86	.53	.63	2.00	2.10	2.24	3.51	1.25	.75	1.99	1.25	1.12	18.23
1960	2.20	2.13	1.86	2.19	4.40	3.38	2.64	1.35	.70	.73	2.22	1.49	25.29

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,781	8.98
1951	1203	5,340	Apr. 17, 1951	258	1,217	0.452	6.15	1,150	5.90
1952	1233	17,100	Mar. 14, 1952	211	2,276	.846	11.51	2,530	12.80
1953	1273	9,020	Feb. 26-27	194	2,571	.956	12.96	2,332	11.75
1954	1333	19,800	Feb. 1, 1954	177	2,254	.838	11.37	2,235	11.26
1955	1383	20,000	Sept. 12, 1955	161	2,456	.913	12.38	2,684	13.55
1956	1433	9,820	Mar. 27, 1956	386	2,200	.818	11.14	2,352	11.90
1957	1505	10,800	Mar. 11, 1957	235	2,284	.849	11.53	2,692	13.60
1958	1553	15,800	May 17, 1958	597	4,238	1.58	21.39	3,678	18.56
1959	1623	13,100	Apr. 29-30	630	3,613	1.34	18.23	4,438	22.40
1960	1703	14,100	Feb. 15, 1960	730	4,996	1.86	25.29	-	-

905. Contentnea Creek near Wilson, N. C.

Location.--Lat 35°41'15", long 77°56'50", in left abutment midway between separated lanes of bridge on U. S. Highway 301, 250 ft downstream from municipal hydroelectric plant, 1 mile upstream from Atlantic Coast Line Railroad bridge, and 3 miles southwest of Wilson, Wilson County.

Drainage area.--236 sq mi.

Records available.--February 1930 to December 1954.

Gage.--Water-stage recorder. Altitude of gage is 78 ft (from topographic map). Prior to June 24, 1934, staff gage at tailrace of municipal hydroelectric plant 250 ft upstream at same datum.

Average discharge.--24 years (1930-54), 235 cfs.

Extremes.--1930-54: Maximum discharge, 4,940 cfs Jan. 24, 1954 (gage height, 13.68 ft); no flow for several days in October, November, and December 1954.
Maximum stage known, about 22.2 ft in September 1924, from information by North Carolina State Highway Commission.

Remarks.--During the period 1951-54 the city of Wilson diverted an average of 3.6 cfs above station for municipal supply. Extreme diurnal fluctuation and considerable regulation during low flow caused by municipal reservoir and powerplant above station. Records of chemical analyses for the period October 1955 to September 1956 are published in report of the Geological Survey.

Correction.--In WSP 1303, the runoff in inches for the water year 1933 is listed in error in the table of monthly and yearly runoff in inches; it should be 11.20 inches.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	39.8	43.4	139	127	125	185	216	47.5	22.0	49.5	41.7	5.4	86.7
1952	.97	19.0	58.0	158	365	1,021	179	78.3	16.1	8.37	48.9	65.8	168
1953	27.3	171	147	285	562	495	421	149	562	101	6.89	1.66	241
1954	4.63	8.38	120	949	352	403	338	148	18.0	23.5	10.8	.61	198
1955	.07	.04	35.0	-	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.19	0.21	0.68	0.62	0.55	0.90	1.02	0.23	0.10	0.24	0.20	0.03	4.97
1952	.005	.09	.28	.77	1.67	4.99	.84	.38	.08	.04	.24	.31	9.70
1953	.13	.81	.72	1.39	2.48	2.42	1.99	.73	2.66	.49	.03	.008	13.86
1954	.02	.04	.59	4.64	1.55	1.97	1.60	.72	.09	.11	.05	.003	11.38
1955	.0004	.0002	.17	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	143	8.25
1951	1203	705	Apr. 11, 1951	1	86.7	0.367	4.97	74.5	4.26
1952	1233	4,660	Mar. 6, 1952	.5	168	.712	9.70	191	10.98
1953	1273	2,100	June 16, 1953	.5	241	1.02	13.68	223	12.85
1954	1333	4,940	Jan. 24, 1954	.1	198	.839	11.38	190	10.90
1955	1333	-	-	0	-	-	-	-	-

910. Nahunta Swamp near Shine, N. C.

Location--Lat 35°29'20", long 77°48'22", on right bank 10 ft downstream from bridge on county highway, 2 miles upstream from Appletree Swamp, 3½ miles north of Shine, Greene County, and 8 miles northwest of Snow Hill.

Drainage area--77.6 sq mi.

Records available--April 1954 to September 1960.

Gage--Water-stage recorder. Datum of gage is 50.74 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Apr. 1, 1955, wire-weight gage at same site and datum.

Average discharge--6 years (1954-60), 83.9 cfs.

Extremes--1954-60: Maximum discharge, 2,910 cfs July 30, 1960 (gage height, 12.21 ft); minimum, 1.0 cfs Oct. 7, 8, 1954 (gage height, 0.80 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	\$105	\$53.5	\$14.0	\$13.7	4.71	2.58	-
1955	2.26	11.2	26.1	31.1	44.4	37.5	25.0	22.7	13.5	9.25	161	396	64.7
1956	61.3	46.6	36.2	51.9	97.0	102	91.7	60.0	22.3	32.8	96.4	59.2	63.2
1957	61.2	47.2	49.2	43.3	78.5	118	46.5	41.6	39.6	9.65	21.9	15.3	47.5
1958	25.6	77.7	184	183	169	189	212	135	28.9	33.4	79.1	21.2	111
1959	90.3	53.3	68.2	80.6	138	191	248	39.3	19.6	102	35.2	19.5	90.1
1960	41.2	61.8	95.3	148	255	162	107	80.6	52.0	225	105	196	127

* Not previously published; estimated on basis of records for stations on Contentnea Creek at Hookerton and Little River near Princeton.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	\$1.65	\$0.80	\$0.20	\$0.20	0.07	0.04	-
1955	0.03	0.16	0.39	0.46	0.60	0.56	.36	.34	.19	.14	2.39	5.70	11.32
1956	.91	.67	.57	.77	1.35	1.51	1.32	.89	.32	.49	1.43	.85	11.08
1957	.91	.68	.73	.64	1.05	1.75	.87	.82	.57	.14	.33	.22	8.32
1958	.58	1.12	2.74	2.72	2.27	2.81	3.04	2.00	.42	.50	1.18	.31	19.49
1959	1.34	.77	1.01	1.20	1.85	2.83	3.56	.58	.28	1.52	.52	.28	15.74
1960	.61	.89	1.42	2.20	3.54	2.40	1.53	1.20	.75	3.35	1.56	2.62	22.27

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-
1954	1383	-	-	al.3	-	-	-	-	-
1955	1383	2,050	Sept. 20, 1955	1.0	64.7	0.834	11.32	73.6	12.89
1956	1433	639	Aug. 22, 1956	6.3	63.2	.814	11.08	64.2	11.25
1957	1503	582	Aug. 18, 1957	2.5	47.5	.612	8.32	58.5	10.24
1958	1553	743	Feb. 28, 1958	10	111	1.43	19.49	105	18.37
1959	1623	958	Apr. 14, 1959	7.8	90.1	1.16	15.74	88.9	15.54
1960	1703	2,910	July 30, 1960	11	127	1.64	22.27	-	-

a Minimum during period July 27 to Sept. 30.

915. Contentnea Creek at Hookerton, N. C.

Location.--Lat 35°25'40", long 77°35'10" (revised), on right bank at Hookerton, Greene County, 0.3 mile upstream from bridge on State Highway 123 and 2½ miles upstream from Wheat Swamp Creek.

Drainage area.--729 sq mi.

Records available.--November 1928 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 16 ft (from topographic map). Prior to Nov. 26, 1934, staff gage at site 200 ft downstream at same datum.

Average discharge.--31 years (1929-60), 754 cfs.

Extremes.--1928-60: Maximum discharge, 11,100 cfs Oct. 6, 1929 (gage height, 18.90 ft); minimum, 15 cfs Oct. 28, 1933 (gage height, 1.22 ft), revised.
Maximum stage known, 23.3 ft in September 1928, from floodmark; high water of autumn 1924 was about 0.1 ft lower, from information by local resident.

Revisions.--The monthly mean discharge for September 1932 was revised in WSP 1503; the resulting revised records as summarized herewith supersede those published in WSP 1303.

Month	Mean	Per square mile	Runoff in inches
September 1932.....	27.5	0.038	0.04
Water year 1931-32.....	399	.547	7.44
Calendar year 1932.....	453	.621	8.46

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	188	171	350	359	331	†481	450	147	88.5	164	136	42.3	†242
1952	43.0	127	176	369	838	2,550	725	279	100	63.3	397	226	491
1953	110	339	393	721	1,182	1,256	816	710	1,030	224	58.2	46.0	569
1954	47.6	63.0	298	1,855	1,139	1,010	1,240	359	110	105	37.2	24.9	521
1955	20.3	41.1	141	207	447	389	258	167	153	295	1,642	5,675	617
1956	607	426	317	383	1,085	1,439	1,034	543	137	511	58.1	408	621
1957	598	538	611	470	1,029	1,585	531	314	431	71.1	77.2	153	531
1958	297	514	2,037	1,939	1,590	1,873	1,906	1,727	410	239	463	403	1,118
1959	809	484	486	1,214	1,592	1,618	2,656	445	192	1,719	948	485	1,051
1960	1,135	1,198	1,072	1,444	3,010	1,838	1,098	1,067	446	517	2,422	1,887	1,422

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.30	0.26	0.55	0.57	0.47	†0.76	0.69	0.23	0.14	0.28	0.22	0.06	†4.51
1952	.07	.19	.28	.58	1.24	4.03	1.11	.44	.15	.10	.63	.35	9.17
1953	.17	.52	.62	1.14	1.69	1.99	1.25	1.12	1.58	.35	.09	.07	10.59
1954	.08	.10	.47	2.93	1.62	1.60	1.90	.57	.17	.17	.06	.04	9.71
1955	.03	.06	.22	.33	.64	.62	.39	.26	.23	.47	2.60	5.63	11.48
1956	.96	.65	.50	.61	1.61	2.28	1.58	.86	.21	.81	.92	.62	11.61
1957	.95	.82	.97	.74	1.47	2.51	.81	.50	.66	.11	.12	.23	9.89
1958	.47	.79	3.22	3.07	2.27	2.96	2.92	2.73	.63	.38	.76	.62	20.82
1959	1.28	.74	.77	1.92	2.27	2.56	4.06	.70	.29	2.72	1.50	.74	19.55
1960	1.79	1.83	1.69	2.28	4.45	2.91	1.68	1.69	.68	.62	3.83	2.89	26.54

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	418	7.79
1951	1203	1,030	Mar. 25, 1951	28	†242	†0.332	†4.51	†211	†3.94
1952	1233	4,950	Mar. 10, 1952	25	491	.674	9.17	533	9.94
1953	1273	2,470	June 22, 1953	30	569	.781	10.59	533	9.93
1954	1333	6,680	Jan. 28, 1954	19	521	.715	9.71	503	9.37
1955	1383	7,160	Sept. 8, 1955	16	617	.846	11.48	713	13.28
1956	1433	2,720	Mar. 24, 1956	50	621	.852	11.61	621	12.23
1957	1503	2,560	Mar. 7-8, 1957	27	531	.728	9.89	625	11.63
1958	1553	4,890	May 13, 1958	95	1,118	1.53	20.82	1,027	19.13
1959	1623	5,070	July 21, 1959	72	1,051	1.44	19.55	1,187	22.07
1960	1703	10,600	Aug. 2, 1960	116	1,422	1.95	26.54	-	-

† Corrected.

917. Little Contentnea Creek near Farmville, N. C.

Location.--Lat 35°32'40", long 77°30'40", on right bank 5 ft downstream from bridge on U.S. Highway 254, 1½ miles upstream from Middle Swamp and 5½ miles southeast of Farmville, Pitt County.

Drainage area.--93.3 sq mi.

Records available.--October 1956 to September 1960. Occasional base-flow measurements made during water years 1952-54, 1956.

Gage.--Water-stage recorder. Altitude of gage is 30 ft (from topographic map). Prior to Aug. 19, 1958, wire-weight gage at same site and datum.

Extremes.--1956-60: Maximum discharge, 2,490 cfs July 31, 1960; maximum gage height, 17.39 ft Sept. 13, 1960; minimum discharge, 0.1 cfs Aug. 11, 1957 (gage height, 6.43 ft).

Floods in August and September 1955 reached stages of 18.9 ft and 18.5 ft, respectively.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	107	62.9	65.7	53.5	135	229	44.5	18.7	8.39	5.45	7.18	34.3	63.9
1958	72.6	209	300	236	203	272	187	132	17.3	30.2	111	14.5	149
1959	158	94.7	114	142	252	231	369	18.8	5.91	160	133	34.1	140
1960	82.8	119	174	237	499	213	144	105	24.2	187	159	306	186

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	1.32	0.75	0.81	0.66	1.50	2.83	0.53	0.23	0.10	0.07	0.09	0.41	9.30
1958	.90	2.50	3.71	2.91	2.27	3.56	2.24	1.63	.21	.37	1.37	.17	21.64
1959	1.71	1.13	1.41	1.75	2.61	2.85	4.41	.23	.07	1.97	1.65	.41	20.40
1960	1.02	1.42	2.15	2.93	5.77	2.63	1.73	1.30	.29	2.31	1.96	3.67	27.18

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1957	1503	498	Sept. 30, 1957	0.1	63.9	0.685	9.30	93.0	13.53
1958	1553	1,380	Feb. 28, 1958	4.2	149	1.60	21.64	129	18.78
1959	1623	1,160	Aug. 9, 1959	1.5	140	1.50	20.40	143	20.74
1960	1703	2,490	July 31, 1960	4.1	186	1.99	27.18	-	-

920. Swift Creek near Vanceboro, N. C.

Location.--Lat 35°20'40", long 77°11'10" (revised), on left bank at highway bridge, 2½ miles upstream from bridge on State Highway 118, 2½ miles downstream from Clayroot Swamp, and 3½ miles northwest of Vanceboro, Craven County.

Drainage area.--182 sq mi.

Records available.--January 1950 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 3.93 ft above mean sea level (Corps of Engineers bench mark). Prior to Jan. 17, 1951, staff gage at same site and datum.

Average discharge.--10 years (1950-60), 175 cfs.

Extremes.--1950-60: Maximum discharge, 6,060 cfs Sept. 22, 1955 (gage height, 13.67 ft); no flow Aug. 8-29, Oct. 4 to Nov. 9, 1954.

Flood in 1909 reached a stage of 16 ft, and flood in 1928 reached a stage of 11.7 ft, from information by local resident.

Remarks.--Records of chemical analyses for the periods October 1950 to September 1952, January 1955 to September 1959, and water temperatures for the periods October 1951 to September 1952, September 1954 to September 1960, are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	26.4	11.4	32.1	51.2	57.9	81.1	53.7	15.6	9.61	277	129	9.15	63.3
1952	8.58	89.8	63.5	130	320	516	147	169	60.4	8.65	24.8	58.3	132
1953	13.5	58.5	71.3	186	437	264	54.9	35.1	32.7	8.11	12.6	73.0	102
1954	30.6	23.0	160	481	114	173	271	36.6	8.26	3.39	.34	1.85	109
1955	.01	.48	3.87	11.5	19.2	27.7	19.6	8.12	8.37	30.7	751	1,718	216
1956	98.2	59.7	44.1	110	372	233	161	122	16.0	78.7	57.1	14.1	113
1957	206	210	68.5	62.1	205	505	148	63.1	29.4	8.52	20.6	35.9	130
1958	242	296	617	557	249	437	316	275	131	22.1	74.0	27.1	271
1959	177	63.8	157	267	384	674	593	59.6	25.3	560	208	95.9	272
1960	152	215	410	491	918	326	336	146	56.3	100	366	652	345

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.17	0.07	0.20	0.32	0.33	0.51	0.33	0.10	0.06	1.75	0.82	0.06	4.72
1952	.05	.55	.40	.82	1.90	3.27	.90	1.07	.37	.05	.16	.36	9.90
1953	.08	.36	.45	1.18	2.50	1.67	.34	.22	.20	.05	.08	.45	7.58
1954	.19	.14	1.01	3.05	.65	1.10	1.66	.23	.05	.02	.002	.01	8.11
1955	.00008	.003	.02	.07	.11	.18	.12	.05	.05	.19	4.76	10.53	16.08
1956	.62	.37	.28	.70	2.21	1.48	.99	.77	.10	.50	.36	.09	8.47
1957	1.30	1.29	.43	.39	1.16	3.20	.91	.40	.18	.05	.13	.22	9.66
1958	1.53	1.81	3.91	3.53	1.42	2.77	1.94	1.74	.80	.14	.47	.17	20.23
1959	1.12	.39	1.00	1.69	2.20	4.27	3.64	.38	.15	3.55	1.32	.59	20.30
1960	.96	1.32	2.60	3.11	5.44	2.06	2.06	.92	.35	.63	2.32	4.00	25.77

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	133	9.93
1951	1203	1,310	July 27, 1951	2.1	63.3	0.348	4.72	70.9	5.28
1952	1233	1,370	Mar. 6, 1952	1.6	152	.725	9.90	131	9.79
1953	1273	1,050	Feb. 10, 1953	.6	102	.560	7.58	108	8.03
1954	1333	1,260	Jan. 25, 1954	0	109	.599	8.11	91.3	6.80
1955	1383	6,060	Sept. 22, 1955	0	216	1.19	16.08	232	12.33
1956	1433	780	Feb. 10, 1956	4.1	113	.621	8.47	137	10.22
1957	1503	1,200	Mar. 9, 1957	1.0	130	.714	9.66	186	13.89
1958	1553	1,120	Mar. 3, 1958	6.5	271	1.49	20.23	208	15.49
1959	1623	2,180	July 18, 1959	3.2	272	1.49	20.30	304	22.67
1960	1703	2,440	Sept. 16, 1960	7.4	345	1.90	25.77	-	-

925. Trent River near Trenton, N. C.

Location.--Lat 35°03'50", long 77°27'20", on left bank 50 ft downstream from Free Bridge, 800 ft downstream from Little Chinquapin Branch, 1½ miles southwest of Phillips Cross-roads, and 6 miles west of Trenton, Jones County.

Drainage area.--168 sq mi.

Records available.--January 1951 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 19.15 ft above mean sea level (unadjusted). Prior to Mar. 21, 1951, wire-weight gage on bridge 50 ft upstream at same datum.

Average discharge.--9 years (1951-60), 1.86 cfs.

Extremes.--1951-60: Maximum discharge, 9,100 cfs Sept. 21, 1955 (gage height, 17.84 ft); minimum, 1.3 cfs Oct. 11-15, 1954.

Flood in 1928 reached a stage of 17.3 ft (discharge, 7,600 cfs), from information furnished by North Carolina State Highway Commission.

Remarks.--Records of chemical analyses and water temperatures for the periods October 1951 to September 1953, January 1955 to September 1960, are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	122	102	149	115	57.4	9.56	159	83.5	13.8	-
1952	5.47	132	124	110	345	440	93.4	82.6	23.6	15.5	13.9	28.0	117
1953	12.6	26.4	41.9	104	352	255	42.2	52.5	71.4	15.6	49.2	171	97.5
1954	147	91.2	358	424	129	159	251	30.1	17.2	7.70	5.68	4.56	134
1955	1.58	1.80	6.65	17.2	31.8	36.5	23.1	21.9	61.5	75.7	1,587	1,577	287
1956	94.8	89.6	103	132	310	249	139	386	37.5	14.0	12.8	17.4	132
1957	40.9	85.0	44.0	58.0	103	377	94.9	19.5	116	22.1	4.97	50.9	84.5
1958	113	184	551	509	250	398	277	269	296	84.8	78.4	68.5	256
1959	294	89.8	193	295	364	834	451	107	32.4	286	43.9	43.9	253
1960	179	252	353	455	662	397	365	110	82.0	163	374	416	316

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	0.84	0.83	1.02	0.76	0.39	0.06	1.09	0.57	0.09	-
1952	0.04	0.88	0.85	.75	2.22	3.02	.62	.57	.16	.11	.10	.19	9.51
1953	.09	.18	.29	.71	2.18	1.75	.28	.36	.47	.11	.34	1.13	7.89
1954	1.01	.61	2.32	2.91	.80	1.09	1.66	.21	.11	.05	.04	.03	10.84
1955	.01	.01	.05	.12	.20	.25	.15	.15	.41	.52	10.89	10.47	23.23
1956	.65	.60	.70	.91	1.99	1.71	.93	2.65	.25	.10	.09	.12	10.70
1957	.28	.56	.30	.40	.64	2.59	.63	.13	.77	.15	.03	.34	6.82
1958	.78	1.22	3.78	3.49	1.55	2.67	1.84	1.84	1.97	.58	.54	.45	20.71
1959	2.02	.60	1.33	2.02	2.28	5.72	3.00	.74	.22	1.97	.30	.29	20.47
1960	1.23	1.67	2.42	3.12	4.25	2.73	2.42	.75	.54	1.12	2.57	2.77	25.59

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	-	-	-
1951	1203	a757	July 6, 1951	b2.9	-	-	-	-	89.5	7.22
1952	1233	1,050	Feb. 28, 1952	3.1	117	0.696	9.51	102	6.30	11.27
1953	1273	1,680	Sept. 30, 1953	4.6	97.5	.580	7.89	139	6.97	25.11
1954	1333	c886	Dec. 17, 1953	2.1	134	.798	10.84	311	25.11	-
1955	1383	9,100	Sept. 21, 1955	1.3	287	1.71	23.23	311	25.11	-
1956	1433	1,400	May 10, 1956	4.8	132	.786	10.70	122	9.89	-
1957	1503	772	Mar. 10, 1957	3.5	84.5	.503	6.82	142	11.46	-
1958	1553	1,330	June 5, 1958	6.8	256	1.52	20.71	234	18.88	-
1959	1623	3,760	Mar. 8, 1959	3.6	253	1.51	20.47	270	21.84	-
1960	1703	2,840	Aug. 1, 1960	12	316	1.88	25.59	-	-	-

* Not previously published.

a Maximum during period January to September.

b Minimum during period January to September.

c Maximum peak discharge; maximum discharge during year 1,500 cfs at 12:01 a.m. Oct. 1, 1953, stage falling.

930. New River near Gum Branch, N. C.

Location (revised).--Lat 34°51'00", long 77°31'00" (revised), on right bank 5 ft down-stream from highway bridge, half a mile downstream from Jenkins Swamp, 1 $\frac{1}{4}$ miles south-west of Gum Branch, Onslow County, and 3 $\frac{1}{2}$ miles southeast of Richlands.

Drainage area.--74.5 sq mi.

Records available.--August 1949 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 3 ft above mean sea level (Corps of Engineers bench mark). Prior to Mar. 23, 1950, staff gage at same site and datum.

Average discharge.--10 years (1950-60), 104 cfs.

Extremes.--1949-60: Maximum discharge, 7,900 cfs Sept. 20, 1955 (gage height, 19.99 ft, from floodmark); minimum, 1.8 cfs Oct. 7, 1954 (gage height, 0.50 ft).
Flood in 1908 reached a stage of about 18 ft, from information by local resident.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	294	64.4	63.8	58.2	58.6	70.8	56.5	26.7	14.3	28.6	66.3	16.2	68.6
1952	6.83	97.6	74.7	58.3	184	181	52.7	132	22.3	14.5	14.6	42.4	73.0
1953	19.3	35.7	41.6	75.7	214	148	35.1	37.9	54.9	9.18	12.2	47.7	59.9
1954	21.5	30.5	163	162	96.0	107	142	28.0	12.9	24.4	6.25	4.25	66.5
1955	2.01	4.30	13.3	32.4	33.1	27.7	21.0	27.4	14.2	26.6	734	887	152
1956	73.5	77.8	67.8	80.3	153	137	80.9	155	36.5	52.8	26.9	20.1	79.8
1957	65.4	96.5	43.3	46.2	80.0	195	56.8	16.4	162	18.5	8.29	43.7	69.0
1958	41.4	96.7	277	238	144	256	200	187	141	114	31.5	97.4	151
1959	185	58.2	122	125	178	418	196	56.7	11.5	140	45.8	49.5	130
1960	91.1	129	212	196	321	200	198	89.4	100	289	174	259	188

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4.56	0.96	0.99	0.90	0.82	1.10	0.85	0.41	0.21	0.44	1.03	0.24	12.51
1952	.11	1.46	1.16	.90	2.66	2.80	.79	2.04	.33	.22	.23	.63	13.33
1953	.30	.54	.64	1.17	2.98	2.30	.53	.59	.82	.14	.19	.72	10.92
1954	.33	.46	2.52	2.51	1.34	1.65	2.13	.43	.19	.38	.10	.06	12.10
1955	.03	.06	.21	.50	.46	.43	.31	.42	.21	.41	11.35	13.29	27.68
1956	1.14	1.17	1.05	1.24	2.21	2.12	1.21	2.37	.55	.82	.42	.30	14.60
1957	1.01	1.45	.67	.71	1.12	3.02	.85	.25	2.42	.29	.13	.65	12.57
1958	.64	1.45	4.29	3.68	2.02	3.65	3.00	2.90	2.11	1.77	.49	1.46	27.46
1959	2.83	.87	1.89	1.93	2.49	6.47	2.93	.57	.17	2.17	.68	.74	23.74
1960	1.41	1.94	3.27	3.04	4.65	3.09	2.97	1.38	1.50	4.48	2.69	3.87	34.29

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	123	22.37	
1951	1203	2,710	Oct. 21, 1950	5.0	68.6	0.921	12.51	47.9	8.73	
1952	1233	1,180	May 20, 1952	4.5	73.0	.980	13.33	66.1	12.08	
1953	1273	668	Feb. 9, 1953	3.3	59.9	.804	10.92	69.9	12.75	
1954	1353	590	Dec. 15, 1953	2.2	66.5	.893	12.10	49.9	9.09	
1955	1383	7,900	Sept. 20, 1955	1.9	152	2.04	27.68	169	30.74	
1956	1433	721	May 9, 1956	6.5	79.8	1.07	14.60	78.6	14.37	
1957	1503	*732	*June 9, 1957	4.2	69.0	.926	12.57	66.9	15.82	
1958	1553	1,180	May 8, 1958	7.8	151	2.03	27.46	146	26.67	
1959	1623	1,730	Mar. 7, 1959	6.0	130	1.74	23.74	136	24.77	
1960	1703	3,030	July 30, 1955	14	188	2.52	34.29	-	-	

* Revised.

935. Haw River near BenaJa, N. C.

Location.--Lat 36°16' (revised), long 79°34', on left bank 200 ft upstream from site of old High Rock Mill, 500 ft upstream from highway bridge, half a mile upstream from Rockingham-Guilford County line, 6 miles downstream from Troublesome Creek, and 6 miles east of BenaJa, Rockingham County.

Drainage area.--168 sq mi.

Records available.--October 1928 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 629 ft (by barometer).

Average discharge.--32 years (1928-60), 161 cfs.

Extremes.--1928-60: Maximum discharge, 12,300 cfs Sept. 25, 1947 (gage height, 19.22 ft, from high-water mark), from rating curve extended above 4,000 cfs on basis of slope-area measurement of peak flow; minimum, 0.6 cfs Oct. 7-9, 1954.

Flood in July 1916 reached a stage of about 17.5 ft, from floodmark on tree 500 ft below gage.

Remarks.--Records of chemical analyses for the period October 1952 to September 1953 and water temperatures for the periods October 1952 to September 1953, July 1954 to September 1960, are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	93.4	95.4	143	111	168	171	279	80.4	186	55.8	45.3	22.5	120
1952	18.8	47.0	197	235	236	554	154	93.6	52.8	38.9	74.4	178	157
1953	50.1	111	172	280	354	282	171	76.8	93.5	29.0	18.9	17.7	137
1954	17.6	24.0	89.9	310	116	179	147	103	56.8	24.6	17.2	3.88	90.9
1955	333	102	208	92.5	206	180	292	112	60.8	64.4	348	112	178
1956	83.2	78.0	68.3	69.3	260	174	195	121	42.8	29.0	33.8	93.2	103
1957	118	108	124	126	439	188	243	75.1	112	43.9	35.9	181	145
1958	86.9	274	186	200	172	203	394	273	95.0	51.9	101	29.5	172
1959	50.2	62.4	151	190	162	125	197	68.6	57.3	95.2	54.0	134	112
1960	619	110	180	198	570	324	347	181	74.2	60.2	57.5	63.3	231

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.64	0.63	0.98	0.76	1.04	1.17	1.85	0.55	1.24	0.38	0.31	0.15	9.70
1952	.13	.31	1.35	1.61	1.52	3.80	1.02	.64	.35	.27	.51	1.18	12.69
1953	.34	.74	1.18	1.92	2.19	1.94	1.13	.53	.62	.20	.13	.12	11.04
1954	.12	.16	.62	2.13	.72	1.23	.97	.71	.38	.17	.12	.05	7.36
1955	2.28	.68	1.43	.63	1.28	1.23	1.94	.77	.40	.58	2.39	.74	14.35
1956	.57	.52	.47	.48	1.67	1.19	1.30	.63	.28	.20	.23	.62	8.36
1957	.81	.71	.85	.87	2.72	1.15	1.62	.52	.74	.30	.25	1.20	11.74
1958	.60	1.82	1.28	1.38	1.06	1.39	2.62	1.68	.63	.36	.69	.20	13.91
1959	.34	.41	1.04	1.30	1.00	.86	1.31	.47	.38	.65	.37	.89	9.02
1960	4.25	.73	1.23	1.36	3.66	2.22	2.30	1.24	.49	.41	.39	.42	18.70

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	129	10.47
1951	1203	1,260	Apr. 10, 1951	15	120	0.714	9.70	114	9.24
1952	1233	1,700	Mar. 5, 1952	11	157	.935	12.69	162	13.16
1953	1273	816	Feb. 23, 1953	6.7	137	.815	11.04	120	9.68
1954	1333	1,470	Jan. 23, 1954	1.4	90.9	.541	7.36	134	10.85
1955	1383	4,060	Oct. 16, 1954	.6	178	1.06	14.35	143	11.52
1956	1433	950	Feb. 7, 1956	6.2	103	.613	8.36	113	9.17
1957	1503	2,280	Feb. 2, 1957	13	145	.863	11.74	162	13.07
1958	1553	1,670	Apr. 30, 1958	20	172	1.02	13.91	148	12.00
1959	1623	1,010	Dec. 29, 1958	18	112	.667	9.02	166	13.44
1960	1703	4,280	Oct. 10, 1959	28	231	1.37	18.70	-	-

Monthly and yearly runoff, in inches, of Horsepen Creek at Battle Ground, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.61	0.53	0.81	0.54	0.86	1.02	1.57	0.42	1.09	0.47	0.89	0.19	8.80
1952	.19	.52	1.86	1.60	1.34	4.63	1.19	.66	.33	.58	.88	.96	14.54
1953	.40	.61	1.82	2.42	3.01	2.45	1.04	.47	2.02	.25	.18	.21	14.88
1954	.17	.23	.69	2.98	.64	1.49	1.24	.51	.27	.20	.25	.07	8.74
1955	1.98	.61	1.62	.72	1.79	.77	1.33	.47	.20	.21	2.35	.62	12.67
1956	.86	.42	.44	.38	2.05	1.07	1.01	1.48	.25	.19	.34	1.52	10.01
1957	.75	.95	1.48	1.28	2.41	1.10	1.50	.57	.90	.32	.24	.47	11.97
1958	.34	2.16	1.30	1.47	1.39	1.33	2.23	1.28	.53	.54	.48	.25	13.50
1959	.30	.39	1.10	1.29	1.28	.88	1.48	.53	.97	1.36	1.04	1.38	12.00
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	10.8	9.23
1951	1203	282	June 18, 1951	1.9	10.3	0.648	8.80	10.8	9.22
1952	1233	1,200	Mar. 4, 1952	1.7	17.0	1.07	14.54	17.5	15.00
1953	1273	620	Feb. 15, 1953	1.6	17.4	1.09	14.88	15.4	13.14
1954	1333	838	Jan. 22, 1954	0.8	10.2	.642	8.74	13.9	11.86
1955	1383	1,840	Oct. 15, 1954	.5	14.8	.931	12.67	11.9	10.18
1956	1433	903	May 4, 1956	.9	11.7	.736	10.01	13.4	11.47
1957	1503	870	Feb. 1, 1957	1.8	14.0	.881	11.97	14.7	12.59
1958	1553	782	Nov. 25, 1957	2.8	15.6	.981	13.30	13.2	11.29
1959	1623	303	Aug. 8, 1959	2.5	14.1	.887	12.00	-	-
1960	-	-	-	-	-	-	-	-	-

945. Reedy Fork near Gibsonville, N. C.

Location.--Lat 36°11', long 79°37', on right bank a quarter of a mile downstream from Huffines Mill, 1½ miles upstream from Buffalo Creek, and 6 miles northwest of Gibsonville, Guilford County.

Drainage area.--133 sq mi.

Records available.--September 1928 to September 1960.

Gage.--Water-stage recorder and rock-masonry control. Datum of gage is 626.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--32 years (1928-60), 110 cfs.

Extremes.--1928-60: Maximum discharge, 11,600 cfs Sept. 25, 1947 (gage height, 20.77 ft); minimum daily, 0.4 cfs Oct. 14, 1954.

Flood in July 1916 reached a stage of 17.90 ft, from information by local resident (discharge, 8,640 cfs).

Remarks.--Considerable diurnal fluctuation caused by powerplants above station. Flow partly regulated since 1923 by Lake Brandt 14 miles upstream (capacity, 113,256,000 cu ft in 1923 to summer of 1960 and about 294,000,000 cu ft thereafter) and by Lake Higgins on Brush Creek, a tributary to Lake Brandt, since 1957 (capacity, about 107,000,000 cu ft) and since 1943 by Richland Lake 12 miles above station. During 1951-60 city of Greensboro diverted from Lake Brandt an average of 16.1 cfs for municipal supply and Cone Mills diverted from Richland Lake an average of 3.7 cfs. Records of chemical analyses and water temperatures for the period October 1951 to September 1952 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	73.1	52.7	86.0	80.7	94.6	100	174	37.0	86.1	43.6	57.4	13.4	73.0
1952	7.94	16.3	147	188	158	479	106	66.5	28.9	14.2	67.4	118	115
1953	27.2	66.7	116	205	292	221	124	43.4	111	13.9	4.25	3.46	101
1954	4.69	8.15	40.4	22.7	59.7	127	94.9	45.5	20.6	5.78	7.42	2.35	53.6
1955	214	45.3	153	59.5	178	95.6	172	44.1	12.6	9.63	184	45.1	101
1956	44.4	30.6	22.9	24.0	187	112	105	91.6	14.9	6.83	8.67	81.7	80.1
1957	53.9	64.2	90.4	86.8	257	111	166	56.4	55.4	25.6	12.2	59.4	83.4
1958	33.9	185	121	139	104	122	251	194	38.9	25.2	38.3	15.7	104
1959	24.7	17.3	106	115	101	72.4	136	37.1	45.4	122	44.0	144	80.1
1960	661	61.2	143	139	468	237	251	69.5	24.7	19.4	39.8	28.0	178

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	77.1	-
1951	1203	1,130	Oct. 24, 1950	4.5	73.0	-	-	69.7	-
1952	1233	2,670	Mar. 5, 1952	2.1	115	-	-	118	-
1953	1273	1,430	Feb. 22, 1953	.5	101	-	-	87.9	-
1954	1333	1,750	Jan. 24, 1954	.7	53.6	-	-	83.8	-
1955	1383	4,310	Oct. 15, 1954	.4	101	-	-	74.1	-
1956	1433	1,460	Sept. 28, 1956	1.2	60.1	-	-	69.4	-
1957	1503	2,100	Feb. 2, 1957	3.0	83.4	-	-	94.0	-
1958	1553	1,720	Nov. 25, 1957	2.8	104	-	-	88.6	-
1959	1623	1,590	Sept. 8, 1959	6.4	80.1	-	-	141	-
1960	1703	7,700	Oct. 11, 1959	9.3	178	-	-	-	-

CAPE FEAR RIVER BASIN

950. South Buffalo Creek near Greensboro, N. C.

Location.--Lat 36°03'36", long 79°43'33", on left bank 5 ft downstream from bridge on McConnell Road, 3.8 miles east of post office in Greensboro, Guilford County, and 6 miles upstream from North Buffalo Creek.

Drainage area.--33.6 sq mi.

Records available.--August 1928 to September 1958. Prior to October 1952, published as "Buffalo Creek."

Gage--Water-stage recorder. Datum of gage is 696.2 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--30 years (1928-58), 38.2 cfs.

Extremes.--1928-58: Maximum discharge, 10,000 cfs July 15, 1949 (gage height, 11.54 ft), from rating curve extended above 2,000 cfs on basis of contracted-opening measurement at gage heights 8.69, 10.64 and 11.54 ft; minimum, 0.2 cfs Oct. 2, 1930.

Remarks.--Sewage from Greensboro enters above station affecting low-water flow. Records of chemical analyses for the period October 1955 to September 1956 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

[illegible]

Yearly discharge, in cubic feet per second

[illegible]

955. North Buffalo Creek near Greensboro, N. C.

Location--Lat 36°07'13", long 79°42'30", on left bank 5 ft downstream from highway bridge, 4.2 miles upstream from mouth, and 5.8 miles northeast of post office in Greensboro, Guilford County.

Drainage area--37.0 sq mi.

Records available--August 1928 to September 1960.

Gage--Water-stage recorder and concrete control. Altitude of gage is 679 ft (from topographic map).

Average discharge--32 years (1928-60), 48.1 cfs.

Extremes--1928-60: Maximum discharge, 6,000 cfs Sept. 25, 1947 (gage height, 15.96 ft), from rating curve extended above 2,900 cfs on basis of contracted-opening measurement at gage heights 14.15 and 15.96 ft; minimum, 1.6 cfs Aug. 28, 1932.

Remarks--Diurnal fluctuation at low flow caused by mills above station. Diversion into the basin from Greensboro and Proximity Mills enters above station. Records of chemical analyses for the period October 1955 to September 1956 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	35.6	27.7	39.5	29.8	40.6	47.0	74.6	18.8	63.1	28.7	55.0	19.2	39.9
1952	19.9	26.7	78.8	76.4	75.7	174	51.4	38.1	25.9	28.0	47.8	47.2	57.6
1953	27.6	51.4	62.6	84.5	123	91.4	46.7	28.2	61.4	18.2	18.2	24.3	52.6
1954	17.4	15.8	36.3	124	36.8	70.6	46.7	36.3	22.4	24.8	33.0	16.3	40.2
1955	102	28.3	66.1	33.6	79.8	39.6	86.1	25.2	22.4	24.6	83.7	51.6	53.5
1956	45.8	29.3	20.0	21.6	94.7	54.4	53.5	57.8	27.0	29.5	27.4	73.4	44.2
1957	44.9	39.8	48.7	60.8	114	57.9	84.1	33.5	57.4	51.4	32.5	63.8	56.9
1958	35.0	96.6	56.1	72.5	70.9	58.9	106	83.7	50.4	34.9	54.9	23.7	61.8
1959	28.0	25.3	65.1	55.4	75.5	44.6	68.5	37.4	76.3	63.9	53.2	70.3	54.9
1960	154	38.3	61.4	87.0	164	126	108	54.2	34.9	34.2	45.4	39.4	78.7

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	40.5	-
1951	1203	1,290	June 18, 1951	10	39.9	-	-	41.8	-
1952	1233	2,370	Mar. 4, 1952	12	57.6	-	-	58.9	-
1953	1273	1,430	Feb. 21, 1953	10	52.6	-	-	46.6	-
1954	1333	1,530	Jan. 22, 1954	9.8	40.2	-	-	51.0	-
1955	1383	5,580	Oct. 15, 1954	8.0	53.5	-	-	44.8	-
1956	1433	1,650	Sept. 26, 1956	11	44.2	-	-	47.5	-
1957	1503	1,930	Feb. 1, 1957	13	56.9	-	-	61.3	-
1958	1553	1,750	Nov. 25, 1957	16	61.8	-	-	56.1	-
1959	1623	1,510	June 2, 1959	14	54.9	-	-	66.3	-
1960	1703	2,790	Oct. 10, 1959	14	78.7	-	-	-	-

960. Stony Creek near Burlington, N. C.

Location.--Lat 36°11', long 79°25', on right bank a quarter of a mile upstream from highway bridge, half a mile upstream from Buttermilk Creek, 4½ miles upstream from mouth, and 6 miles north of Burlington, Alamance County.

Drainage area.--44.2 sq mi.

Records available.--July 1952 to September 1959.

Gage.--Water-stage recorder. Datum of gage is 536.3 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--7 years (1952-59), 35.9 cfs.

Extremes.--1952-59: Maximum gage height, 15.26 ft Oct. 16, 1954 (discharge not determined); no flow at times in most years.

Remarks.--Records of chemical analyses for the period October 1955 to September 1956 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	6.87	23.4	-
1953	2.53	34.4	61.2	99.9	129	82.0	35.4	9.01	7.19	0.535	.060	.015	37.9
1954	.012	.010	4.84	93.4	13.3	78.7	28.7	16.4	8.38	1.52	.771	.008	20.7
1955	61.2	42.4	68.1	20.3	73.4	64.0	65.3	9.19	4.80	8.69	26.7	14.4	58.0
1956	33.7	7.64	5.85	6.52	102	55.7	63.0	51.1	2.37	6.92	21.6	24.8	31.4
1957	38.0	27.5	46.7	49.5	150	57.3	61.0	6.60	5.74	2.08	20.5	33.8	40.8
1958	13.1	107	50.8	100	77.0	51.1	123	77.2	16.0	3.70	10.0	.644	52.2
1959	1.33	5.00	59.5	40.9	59.4	17.0	68.0	9.05	18.7	9.08	5.18	76.2	30.4
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	0.18	0.59	-
1953	0.07	0.87	1.60	2.61	3.04	2.14	0.89	0.23	0.18	0.01	.002	.0004	11.64
1954	.0003	.0002	.13	2.44	.31	2.05	.72	.43	.21	.04	.02	.0002	6.35
1955	1.60	1.07	1.78	.53	1.73	1.67	1.65	.24	.12	.23	.70	.36	11.68
1956	.88	.19	.15	.17	2.48	1.45	1.59	1.33	.06	.18	.56	.63	9.67
1957	.99	.69	1.22	1.29	3.54	1.49	1.54	.17	.14	.05	.53	.85	12.50
1958	.34	2.70	1.33	2.62	1.81	1.33	3.11	2.01	.40	.10	.26	.02	16.03
1959	.03	.13	1.55	1.07	1.40	.44	1.72	.24	.47	.24	.14	1.92	9.35
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	1273	-	-	20.4	-	-	-	-	-
1953	1273	1,670	Feb. 15, 1953	0	37.9	0.857	11.64	30.1	9.23
1954	1333	1,600	Jan. 23, 1954	0	20.7	.468	6.35	34.7	10.67
1955	1383	(b)	Oct. 16, 1954	0	38.0	.860	11.68	27.5	8.45
1956	1433	1,870	May 4, 1956	.28	31.4	.710	9.67	36.9	11.35
1957	1503	2,480	Feb. 1, 1957	.11	40.8	.923	12.50	45.6	13.97
1958	1553	2,410	Nov. 25, 1957	.24	52.2	1.18	16.03	43.6	13.37
1959	1623	2,170	Sept. 7, 1959	.11	30.4	.688	9.35	-	-
1960	-	-	-	-	-	-	-	-	-

a Minimum day during period July 24 to Sept. 30.

b Discharge not determined.

965. Haw River at Haw River, N. C.

Location.--Lat 36°05', long 79°22', on left bank at town of Haw River, Alamance County, 650 ft downstream from Southern Railway bridge and 3 miles downstream from Stony Creek.

Drainage area.--599 sq mi.

Records available.--October 1928 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 471.69 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--32 years (1928-60), 585 cfs.

Extremes.--1928-60: Maximum discharge, 37,000 cfs Sept. 18, 1945 (gage height, 31.10 ft, from floodmark), from rating curve extended above 26,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 3 cfs Sept. 5, 1930 (gage height, 0.92 ft); minimum daily, 5 cfs Sept. 6, 1930.

Remarks.--Large diurnal fluctuation and some regulation for short periods at low flow caused by powerplants above station. Flow partly regulated since July 1960 by a reservoir on Stony Creek (capacity, 427,800,000 cu ft) 8 miles above station. During 1951-60, the city of Burlington diverted from Stony Creek an average of about 6.7 cfs for municipal supply, about 3.7 cfs of which was returned above the station as sewage, and about 3.0 cfs was returned to Haw River below station during the year. Records of chemical analyses for the period October 1956 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	321	238	516	329	531	598	1,110	211	508	188	210	78	401
1952	53.1	129	880	981	1,019	2,409	661	446	191	115	275	584	646
1953	123	514	677	1,216	1,609	1,211	590	225	407	101	57.2	65.4	560
1954	52.4	61.1	253	1,273	346	872	546	338	161	81.5	103	33.4	345
1955	1114	334	819	340	1,089	658	939	296	148	182	934	372	600
1956	372	210	170	172	1,181	702	730	525	129	133	149	442	406
1957	465	406	563	552	1,699	708	871	206	313	207	191	464	545
1958	279	1,159	746	986	799	663	1,429	1,146	360	194	277	78.1	675
1959	123	157	667	643	754	394	835	225	397	391	254	630	453
1960	2,480	522	795	814	2,394	1,481	1,404	542	250	201	279	284	950

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.62	0.44	0.99	0.63	0.92	1.15	2.07	0.41	0.95	0.36	0.40	0.14	9.08
1952	.10	.24	1.69	1.89	1.84	4.63	1.23	.86	.56	.22	.53	1.09	14.68
1953	.24	.96	1.30	2.34	2.80	2.33	1.10	.43	.76	.20	.11	.12	12.69
1954	.10	.11	.49	2.45	.60	1.68	1.02	.65	.30	.16	.20	.06	7.82
1955	2.14	.62	1.58	.65	1.89	1.27	1.75	.57	.28	.35	1.80	.69	13.59
1956	.72	.39	.33	.33	2.13	1.35	1.36	1.01	.24	.26	.29	.82	9.23
1957	.89	.76	1.08	1.06	2.95	1.36	1.62	.40	.58	.40	.37	.86	12.33
1958	.54	2.16	1.44	1.90	1.39	1.28	2.66	2.21	.67	.37	.53	.15	15.30
1959	.24	.29	1.28	1.24	1.31	.76	1.56	.43	.74	.75	.49	1.17	10.26
1960	4.77	.97	1.53	1.57	4.31	2.85	2.62	1.04	.46	.39	.54	.53	21.58

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	426	9.64
1951	1203	7,770	Apr. 8, 1951	26	401	0.669	9.08	400	9.06
1952	1233	15,200	Mar. 4, 1952	25	646	1.08	14.68	666	15.15
1953	1273	8,400	Feb. 15, 1953	23	560	.935	12.69	480	10.89
1954	1333	8,670	Jan. 23, 1954	14	345	.576	7.82	506	11.46
1955	1383	20,900	Oct. 16, 1954	14	600	1.00	13.59	471	10.69
1956	1433	6,490	Feb. 7, Mar. 16	16	406	.678	9.23	463	10.52
1957	1503	12,800	Feb. 1, 1957	40	545	.910	12.33	606	13.74
1958	1553	11,300	Nov. 25, 1957	41	675	1.13	15.30	572	12.97
1959	1623	8,940	Dec. 29, 1958	56	453	.756	10.26	694	15.72
1960	1703	22,600	Oct. 10, 1959	79	950	1.59	21.58	-	-

967. Alamance Creek near Elon College, N. C.

Location--Lat 36°02', long 79°32', on right bank at upstream side of bridge on county highway, 1½ miles upstream from Beaver Creek and 4½ miles south of Elon College, Alamance County.

Drainage area--116 sq mi.

Records available--August 1957 to September 1960.

Gage--Water-stage recorder. Altitude of gage is 495 ft (by barometer). Prior to Nov. 15, 1957, wire-weight gage at same site and datum.

Extremes--1957-60: Maximum discharge, 4,230 cfs Feb. 6, 1960 (gage height, 18.65 ft); minimum, 3.9 cfs Sept. 19, 20, 1958.
Flood in September 1945 reached a stage of 29.4 ft (discharge not determined), from information by local resident.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	-	-	-	-	-	-	-	-	47.5	-
1958	46.0	201	114	193	183	123	305	224	62.9	40.0	28.4	9.67	127
1959	11.1	13.8	107	113	163	66.5	223	47.6	177	50.8	48.8	67.9	90.0
1960	142	119	136	197	517	351	257	76.3	24.1	49.2	115	88.2	171

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	-	-	-	-	-	-	-	-	0.46	-
1958	0.46	1.93	1.14	1.92	1.65	1.22	2.94	2.22	0.60	0.40	0.28	.09	14.85
1959	.11	.13	1.07	1.12	1.47	.66	2.15	.47	1.71	.51	.48	.65	10.53
1960	1.41	1.14	1.35	1.95	4.81	3.48	2.47	.76	.23	.49	1.14	.85	20.08

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1957	1623	-	-	a5.9	-	-	-	-	-	-	-
1958	1623	3,540	Apr. 10, 1958	3.9	127	1.09	14.85	108	12.63		
1959	1623	4,130	June 4, 1959	5.6	90.0	.776	10.53	112	13.12		
1960	1703	4,230	Feb. 6, 1960	8.6	171	1.47	20.08	-	-		

a Minimum day during period Aug. 21 to Sept. 30.

968.5. Cane Creek near Teer, N. C.

Location--Lat 35°57', long 79°15', on left bank at downstream side of bridge on State Highway 54, 1½ miles southwest of Teer, Orange County, 2½ miles upstream from mouth, and 10 miles west of Carrboro.

Drainage area--31.3 sq mi.

Records available--October 1959 to September 1960.

Gage--Water-stage recorder. Datum of gage is 432.30 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes--Maximum discharge during year, 2,380 cfs May 28 (gage height, 14.08 ft); minimum, 2.4 cfs July 21, 22, 23, 24, 25, 26, 27 (gage height, 3.97 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	33.1	34.2	36.6	46.2	146	108	84.5	41.8	11.6	9.20	17.1	10.1	47.8

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	1.22	1.22	1.35	1.70	5.05	3.97	3.01	1.54	0.42	0.34	0.63	0.36	20.81

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1960	1703	2,380	May 28, 1960	2.7	47.8	1.53	20.81	-	-		

970. Haw River near Pittsboro, N. C.

Location.--Lat 35°42', long 79°05', on left bank 100 ft upstream from Robeson Creek, 2 miles downstream from bridge on U.S. Highway 64, and 5 miles east of Pittsboro, Chat-ham County.

Drainage area.--1,310 sq mi, approximately.

Records available.--October 1928 to September 1960. Monthly discharges only for October 1928, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 179.22 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 15, 1929, staff gage at same site and datum.

Average discharge.--32 years (1928-60), 1,254 cfs.

Extremes.--1928-60: Maximum discharge, 79,000 cfs during night of Sept. 18, 1945 (gage height, 28.58 ft, from floodmark in gage shelter), from rating curve extended above 46,000 cfs and confirmed by current-meter measurements (discharge, 78,000 cfs) made at site 6 miles upstream; minimum, 3.1 cfs Sept. 13, 1954; minimum daily, 5.3 cfs Sept. 20, 1953.

Flood in August 1908 reached a stage of 32.1 ft, from floodmarks, 1,000 ft upstream (discharge, 98,000 cfs). Flood in 1865 reached a stage about 1 ft lower than flood of 1908, from information by local residents. Flood in September 1928 reached a stage of 20.3 ft from floodmarks (discharge, 39,200 cfs).

Remarks.--Considerable diurnal fluctuation and some regulation for short periods at low flow caused by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	470	347	1,005	581	916	1,218	2,321	416	585	275	359	84.2	712
1952	49.6	342	1,750	1,909	2,296	5,195	1,613	889	429	266	583	1,459	1,586
1953	268	1,369	1,231	2,841	3,433	3,015	1,333	532	704	180	68.0	105	1,243
1954	59.5	80.6	445	2,832	688	1,792	1,284	701	347	159	150	55.3	719
1955	2,071	617	1,613	698	2,509	1,147	1,622	579	207	359	1,899	746	1,150
1956	669	374	266	293	2,374	1,671	1,367	914	243	230	230	766	776
1957	1,164	776	1,366	983	4,146	2,027	1,623	495	679	493	571	991	1,256
1958	799	2,526	1,669	2,780	2,194	1,626	3,363	2,884	674	638	468	146	1,643
1959	192	204	1,159	1,299	1,821	968	2,645	576	830	820	507	1,077	1,018
1960	3,491	1,222	1,577	1,776	5,749	3,778	3,170	1,121	406	409	833	553	1,994

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.41	0.30	0.88	0.51	0.73	1.09	1.98	0.37	0.50	0.24	0.32	0.07	7.38
1952	.04	.16	1.54	1.68	1.89	4.57	1.37	.78	.37	.23	.51	1.24	14.38
1953	.24	1.17	1.08	2.50	2.73	2.85	1.13	.47	.60	.16	.06	.09	12.88
1954	.05	.07	.39	2.49	.55	1.58	1.09	.62	.30	.14	.13	.05	7.46
1955	1.82	.53	1.42	.61	1.84	1.01	1.38	.51	.18	.32	1.67	.64	11.93
1956	.59	.32	.23	.26	1.95	1.47	1.16	.80	.21	.20	.20	.65	8.04
1957	1.02	.66	1.20	.87	3.30	1.78	1.38	.44	.58	.43	.50	.84	13.00
1958	.70	2.15	1.47	2.45	1.74	1.43	2.86	2.54	.57	.56	.41	.12	17.00
1959	.17	.17	1.02	1.14	1.45	.87	2.42	.51	.71	.72	.45	.92	10.55
1960	3.07	1.04	1.39	1.56	4.73	3.32	2.70	.99	.35	.36	.73	.47	20.71

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	852	8.82
1951	1203	18,400	Apr. 8, 1951	10	712	0.544	7.38	727	7.53
1952	1233	38,300	Mar. 4, 1952	7.8	1,366	1.06	14.58	1,457	15.15
1953	1273	21,100	Feb. 15, 1953	5.3	1,243	.949	12.68	1,052	10.90
1954	1333	24,000	Jan. 23, 1954	5.6	719	.549	7.46	1,034	10.72
1955	1385	37,900	Oct. 16, 1954	14	1,150	.88	11.93	897	9.30
1956	1433	21,700	Mar. 16, 1956	27	776	.592	8.04	944	9.78
1957	1503	28,900	Feb. 1, 1957	65	1,256	.959	13.00	1,394	14.44
1958	1553	22,400	Nov. 26, 1957	26	1,643	1.25	17.00	1,557	14.04
1959	1623	19,400	Dec. 29, 1958	43	1,018	.777	10.55	1,417	14.69
1960	1703	25,700	Oct. 11, 1959	75	1,994	1.52	20.71	-	-

980. New Hope River near Pittsboro, N. C.

Location.--Lat 35°44', long 79°02', on right bank at downstream side of bridge on U.S. Highway 64, a quarter of a mile downstream from Whiteoak Creek, and $\frac{8}{10}$ miles east of Pittsboro, Chatham County.

Drainage area.--285 sq mi.

Records available.--January 1949 to September 1960.

Gage.--Water-stage recorder and concrete control since 1953. Datum of gage is 175.75 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Mar. 18, 1950, staff gage at same site and datum.

Average discharge.--11 years (1949-60), 273 cfs.

Extremes.--1949-60: Maximum discharge, 7,900 cfs Mar. 5, 1952 (gage height, 19.74 ft); minimum, 2.0 cfs Sept. 4, 1953. Flood in September 1945 reached a stage of 27.65 ft; 1929 flood, 25.3 ft, 1908 flood, 23.85 ft; from information by North Carolina State Highway Commission.

Remarks.--During the period 1951-60 the city of Durham discharged an average of about 4.8 cfs sewage effluent into basin above station, diverted from Neuse River. Records of chemical analyses for the periods October 1953 to September 1954, October 1955 to September 1956, and water temperatures for the period October 1955 to September 1956 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	30.6	25.7	92.2	85.9	153	230	583	71.1	30.0	28.3	39.5	9.47	114
1952	7.40	15.4	135	378	557	1,341	386	136	32.8	16.6	163	374	293
1953	19.4	498	154	950	825	1,085	429	154	95.9	22.3	11.0	30.4	353
1954	8.10	10.3	235	1,268	165	431	359	117	24.3	15.1	13.2	3.94	224
1955	51.7	43.6	208	142	815	234	243	26.4	9.71	20.0	303	327	197
1956	91.9	92.9	38.7	49.8	690	547	440	91.7	114	18.4	34.9	36.8	185
1957	229	154	390	111	976	756	115	147	289	51.1	169	107	287
1958	228	622	680	804	567	647	696	989	53.0	61.6	56.8	11.3	452
1959	21.0	16.9	166	275	512	299	1,139	55.7	85.4	250	169	264	268
1960	287	353	348	417	1,546	866	968	202	71.7	82.4	122	32.2	436

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.12	0.10	0.37	0.35	0.56	0.93	2.28	0.29	0.12	0.11	0.16	0.04	5.43
1952	.03	.06	.54	1.53	2.03	5.43	1.51	.55	.13	.07	.66	1.47	14.01
1953	.08	1.95	.62	3.84	3.01	4.39	1.68	.62	.37	.09	.04	.12	16.81
1954	.03	.04	.95	5.13	.67	1.74	1.40	.47	.10	.06	.05	.02	10.66
1955	.21	.17	.84	.57	2.98	.95	.95	.11	.04	.08	1.23	1.28	9.41
1956	.37	.36	.16	.20	2.61	2.21	1.72	.37	.44	.07	.14	.14	8.79
1957	.93	.60	1.58	.45	3.57	3.06	.45	.60	1.13	.21	.69	.42	13.69
1958	.92	2.44	2.75	3.25	2.07	2.62	2.72	4.00	.21	.25	.23	.04	21.50
1959	.08	.07	.67	1.11	1.87	1.21	4.46	.23	.33	1.01	.68	1.03	12.75
1960	1.16	1.38	1.41	1.69	5.85	3.50	3.79	.82	.28	.33	.49	.13	20.83

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	162	7.71
1951	1203	2,230	Apr. 11, 1951	4.8	114	0.400	5.43	115	5.47
1952	1233	7,900	Mar. 5, 1952	4.5	293	1.03	14.01	335	16.03
1953	1273	5,310	Mar. 25, 1953	2.2	353	1.24	16.81	319	15.18
1954	1333	7,600	Jan. 24, 1954	2.6	224	.786	10.66	228	10.86
1955	1383	3,110	Aug. 20, 1955	2.9	197	.691	9.41	190	9.08
1956	1433	3,920	Mar. 18, 1956	5.7	185	.649	8.79	231	11.01
1957	1503	4,100	Feb. 3, 1957	6.1	287	1.01	13.69	350	16.69
1958	1553	5,970	May 8, 1958	7.0	452	1.58	21.50	341	16.21
1959	1623	4,100	Apr. 14, 1959	8.8	268	.940	12.75	333	15.88
1960	1703	3,920	Apr. 6, 1960	13	436	1.53	20.83	-	-

985. West Fork Deep River near High Point, N. C.

Location.--Lat 36°00'15", long 79°58'42", on left bank 2,300 ft upstream from highway bridge and High Point Lake, 2.3 miles west of Jamestown, and 2.5 miles northeast of High Point College, High Point, Guilford County.

Drainage area.--32.1 sq mi. At site used 1923-26, 33 sq mi.

Records available.--June 1923 to September 1958, water years 1959-60 (annual maximum). Monthly discharge only for some periods, published in WSP 1303.

Gage.--Crest-stage gage. Altitude of gage is 758 ft (from topographic map). June 14, 1923, to Sept. 30, 1926, staff gage at site 2,300 ft downstream at different datum. July 25, 1928, to Sept. 30, 1958, water-stage recorder, with Parshall flume since July 28, 1934, at present site and datum.

Average discharge.--35 years (1923-58), 31.9 cfs.

Extremes.--1923-60: Maximum discharge, 8,450 cfs Sept. 24, 1947 (gage height, 19.92 ft, from floodmarks), from rating curve extended above 2,000 cfs on basis of contracted-opening measurement of peak flow.

1923-58: Minimum discharge, 0.3 cfs Sept. 1, 1932.

Remarks.--Occasionally some diurnal fluctuation at low flow caused by gristmill 4 miles upstream.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	12.6	13.0	21.4	16.2	27.5	27.4	45.8	9.95	23.7	13.0	15.5	6.11	19.2
1952	5.81	8.86	38.2	46.0	46.8	138	31.9	21.3	9.91	13.2	51.2	35.7	37.2
1953	10.7	18.1	50.1	67.4	104	75.3	28.8	12.7	45.3	7.13	4.76	7.09	35.5
1954	5.11	6.01	27.6	105	21.6	51.4	40.8	15.0	11.5	5.92	16.8	2.56	25.9
1955	58.3	59.2	21.0	20.4	63.7	29.5	50.4	15.5	7.27	15.9	71.7	9.58	36.8
1956	19.8	11.4	10.0	10.4	82.1	23.9	41.9	30.3	17.8	14.3	11.5	49.6	26.6
1957	12.7	18.6	33.5	52.5	82.5	31.8	52.9	11.6	39.3	10.4	5.51	13.0	29.9
1958	11.4	69.5	35.5	43.3	43.2	33.7	64.4	38.1	12.7	21.1	13.9	5.86	32.6
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.45	0.45	0.77	0.58	0.89	0.98	1.59	0.36	0.83	0.47	0.56	0.21	8.14
1952	.14	.31	1.37	1.65	1.57	4.95	1.11	.77	.34	.47	1.84	1.24	15.76
1953	.38	.63	1.80	2.42	3.36	2.70	1.00	.46	1.58	.26	.17	.25	15.01
1954	.18	.21	.99	3.78	.70	1.85	1.42	.54	.40	.21	.60	.09	10.97
1955	2.09	1.36	2.19	.73	2.07	1.06	1.75	.56	.25	.57	2.58	.33	15.54
1956	.71	.40	.36	.37	2.76	.86	1.46	1.09	.62	.51	.41	1.72	11.27
1957	.46	.65	1.20	1.88	2.68	1.14	1.84	.42	1.37	.37	.20	.45	12.66
1958	.41	2.42	1.27	1.55	1.40	1.21	2.24	1.37	.44	.76	.50	.20	13.77
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1203	546	Apr. 3, 1951	3.4	19.2	0.598	8.14	20.9	8.83
1952	1233	2,460	Aug. 31, 1952	3.0	37.2	1.16	15.76	39.5	16.75
1953	1273	1,400	Mar. 24, 1953	2.4	35.5	1.11	15.01	32.1	13.58
1954	1333	1,410	Jan. 21, 1954	1.8	25.9	.807	10.97	36.0	15.23
1955	1383	3,120	Oct. 15, 1954	1.2	36.8	1.15	15.54	26.9	11.37
1956	1433	1,220	Sept. 26, 1956	3.2	26.6	.829	11.27	28.6	12.11
1957	1503	2,210	Jan. 31, 1957	3.2	29.9	.931	12.66	34.2	14.45
1958	1553	1,600	Nov. 25, 1957	4.2	32.6	1.02	13.77	-	-
1959	-	4,150	Sept. 5, 1959	-	-	-	-	-	-
1960	-	4,730	Oct. 10, 1959	-	-	-	-	-	-

990. East Fork Deep River near High Point, N. C.

Location.--Lat 36°02'15", long 79°56'46", on left bank 5 ft upstream from highway bridge, 3.3 miles upstream from High Point Dam, and 5.2 miles northeast of High Point College, High Point, Guilford County.

Drainage area.--14.7 sq mi.

Records available.--July 1928 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 764.02 ft above mean sea level, unadjusted. Intake pipe extended to downstream side of bridge since Mar. 1, 1934.

Average discharge.--32 years (1928-60), 15.0 cfs.

Extremes.--1928-60: Maximum discharge, 6,300 cfs Sept. 24, 1947 (gage height, 10.87 ft, from floodmark), from rating curve extended above 1,600 cfs on basis of contracted-opening measurement of peak flow; minimum, 0.7 cfs Sept. 22, 1941 (result of temporary regulation); minimum unregulated, 1.1 cfs Oct. 7, 1954.

Remarks.--Occasional temporary regulation of unknown origin during low flow in some water years.

Revisions.--The momentary maximum discharge for the water year 1929, published in WSP 1303, also occurred on Feb. 28, 1929.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6.31	6.70	10.4	7.51	12.4	12.1	20.1	5.11	18.1	5.65	8.29	3.56	9.63
1952	2.86	4.72	23.5	20.5	21.6	67.5	17.1	8.57	4.87	8.65	27.2	8.98	18.1
1953	5.30	6.95	21.1	30.5	49.0	31.4	15.3	6.23	24.8	4.48	3.34	4.21	18.5
1954	3.51	3.81	10.4	43.8	10.3	21.6	18.5	7.70	5.20	4.61	5.33	1.74	11.4
1955	34.1	12.2	22.4	8.94	28.0	12.0	18.9	6.72	4.13	5.28	32.5	7.79	16.0
1956	9.25	5.85	4.78	4.71	29.4	14.9	14.7	21.9	5.11	5.51	6.45	19.3	11.7
1957	7.23	9.65	16.2	33.9	35.3	14.4	32.6	5.95	11.0	6.25	3.56	7.22	15.1
1958	5.51	38.4	16.0	20.6	19.3	17.8	31.6	19.7	8.80	8.99	6.30	3.42	†16.3
1959	4.05	4.58	14.9	16.9	21.9	12.4	19.2	6.95	9.32	18.0	17.0	22.2	15.9
1960	79.5	9.79	17.1	32.3	66.5	38.5	38.3	13.9	6.67	6.85	5.97	5.03	26.6

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.49	0.51	0.81	0.59	0.88	0.95	1.53	0.40	1.38	0.44	0.65	0.27	8.90
1952	.22	.36	1.84	1.61	1.56	5.29	1.30	.67	.37	.68	2.13	.67	16.72
1953	.42	.53	1.65	2.39	3.47	2.46	1.01	.49	1.88	.35	.26	.32	15.23
1954	.28	.29	.82	3.44	.73	1.69	1.41	.60	.39	.36	.42	.13	10.56
1955	2.68	.93	1.76	.70	1.98	.94	1.43	.53	.31	.41	2.55	.59	14.81
1956	.73	.44	.37	.37	2.16	1.17	1.12	1.71	.39	.43	.51	1.47	10.87
1957	.57	.73	1.27	2.68	2.50	1.13	2.48	.47	.84	.49	.28	.55	13.97
1958	.43	2.91	1.25	1.61	1.37	1.40	2.40	1.54	.67	.70	.49	.26	15.03
1959	.32	.35	1.17	1.32	1.55	.97	1.46	.55	.71	1.41	1.33	1.69	12.83
1960	6.24	.74	1.34	2.53	4.88	3.02	2.90	1.09	.51	.54	.47	.38	24.64

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	9.66	8.92
1951	1203	588	June 17, 1951	2.7	9.63	0.655	8.90	10.3	9.51
1952	1233	2,120	Mar. 4, 1952	2.4	18.1	1.23	16.72	18.2	16.90
1953	1273	1,760	Feb. 21, 1953	2.4	16.5	1.12	15.23	15.2	14.02
1954	1333	1,530	Jan. 21, 1954	1.5	11.4	.776	10.56	15.7	14.54
1955	1383	3,410	Oct. 15, 1954	1.2	16.0	1.09	14.81	11.9	10.98
1956	1433	1,980	May 4, 1956	1.9	11.7	.796	10.87	12.8	11.90
1957	1503	2,560	Jan. 31, 1957	1.9	15.1	1.03	13.97	17.3	15.99
1958	1553	1,860	Nov. 25, 1957	2.5	†16.3	1.11	15.03	13.3	12.28
1959	1623	1,720	Aug. 8, 1959	2.8	13.9	.946	12.83	20.9	19.31
1960	1703	4,830	Oct. 10, 1959	3.6	26.6	1.81	24.64	-	-

† Corrected.

995. Deep River near Randleman, N. C.

Location.--Lat 35°54', long 79°51' (revised), on left bank 500 ft downstream from highway bridge, a quarter of a mile downstream from Coltrane's mill, half a mile south of Guilford County line, 4½ miles upstream from Muddy Creek, and 7 miles north of Randleman, Randolph County.

Drainage area.--124 sq mi.

Records available.--October 1928 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 638.11 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--32 years (1928-60), 121 cfs.

Extremes.--1928-60: Maximum discharge, 20,000 cfs Sept. 25, 1947 (gage height, 32.2 ft, from floodmark), from rating curve extended above 7,100 cfs on basis of contracted-opening measurement of peak flow at bridge 1½ miles upstream; minimum, 0.5 cfs Nov. 28, 1931 (gage height, 1.41 ft); minimum daily, 1.2 cfs Nov. 12, 1933.

Remarks.--Large diurnal fluctuation at low flow caused by Coltrane's mill. Flow slightly regulated by High Point Lake (capacity, 220,588,000 cu ft). City of High Point diverted above station about 3 cfs from this basin into Pee Dee River basin.

Revisions.--In WSP 1303, the date of the momentary maximum discharge for water year 1929 is listed in error; it should be Feb. 28, 1929.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	30.0	34.8	87.2	50.9	80.9	94.7	177	29.1	112	26.9	30.1	17.4	62.9
1952	12.0	18.0	195	187	202	565	119	74.1	32.9	22.2	122	134	141
1953	25.1	73.5	175	271	431	248	105	45.8	162	26.0	20.1	14.3	131
1954	15.4	14.7	51.0	359	73.0	218	157	52.7	29.5	22.8	35.5	11.7	87.1
1955	212	80.2	205	75.3	253	110	234	49.5	17.6	56.3	298	85.1	139
1956	83.7	39.2	28.8	30.6	292	127	149	88.3	35.5	34.3	21.1	157	89.5
1957	52.3	74.3	129	167	380	147	224	35.6	103	42.8	24.6	23.7	115
1958	31.0	244	148	184	181	153	312	205	41.8	48.1	40.9	20.0	132
1959	21.3	26.6	104	151	191	96.1	205	44.9	82.2	89.5	172	236	116
1960	459	88.5	145	295	584	351	294	99.2	42.7	51.8	86.7	88.4	214

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.28	0.31	0.62	0.47	0.76	0.88	1.59	0.27	1.01	0.25	0.28	0.16	6.88
1952	.11	.16	1.79	1.74	1.76	5.26	1.07	.69	.30	.21	1.14	1.21	15.44
1953	.23	.66	1.61	2.52	3.62	2.31	.94	.43	1.45	.24	.19	.13	14.33
1954	.14	.13	.47	3.33	.61	2.02	1.41	.49	.27	.21	.33	.11	9.52
1955	1.97	.72	1.91	.70	2.13	1.02	2.10	.46	.16	.52	2.77	.77	15.23
1956	.78	.35	.27	.28	2.54	1.18	1.34	.82	.32	.32	.20	1.41	9.81
1957	.49	.67	1.20	1.65	3.19	1.37	2.02	.33	.95	.40	.23	.21	12.59
1958	.29	2.19	1.37	1.71	1.52	1.24	2.81	1.88	.38	.45	.38	.18	14.40
1959	.20	.24	.97	1.22	1.61	.89	1.85	.42	.74	.83	1.60	2.13	12.70
1960	4.26	.80	1.35	2.75	5.08	3.26	2.64	.92	.38	.48	.81	.80	23.53

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	70.8	7.74
1951	1203	2,900	June 18, 1951	6.7	62.9	0.507	6.88	70.7	7.73
1952	1233	6,540	Mar. 4, 1952	1.9	141	1.14	15.44	145	15.88
1953	1273	4,850	Feb. 21, 1953	-	131	1.06	14.33	115	12.57
1954	1353	4,400	Jan. 22, 1954	3.8	87.1	.702	9.52	122	13.38
1955	1383	7,900	Oct. 15, 1954	4.6	159	1.12	15.23	110	12.03
1956	1433	2,840	Sept. 27, 1956	7.8	89.5	.722	9.81	98.2	10.77
1957	1503	5,800	Feb. 1, 1957	8.9	115	.927	12.59	129	14.08
1958	1553	4,040	Nov. 25, 1957	8.5	132	1.06	14.40	109	11.96
1959	1623	4,200	Sept. 7, 1959	12	116	.935	12.70	162	17.70
1960	1703	8,140	Oct. 10, 1959	21	214	1.73	23.53	-	-

CAPE FEAR RIVER BASIN

1005. Deep River at Ramseur, N. C.

Location.--Lat 35°44', long 79°39', on right bank 1,600 ft downstream from railroad station at Ramseur, Randolph County, and 1½ miles downstream from Sandy Creek.

Drainage area.--346 sq mi.

Records available.--November 1922 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 419.50 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--37 years (1923-60), 349 cfs.

Extremes.--1922-60: Maximum discharge, 43,000 cfs Sept. 18, 1945 (gage height, 34.04 ft, from floodmark), from rating curve extended above 18,000 cfs on basis of slope-area measurement of peak flow; minimum, 0.4 cfs May 27, Nov. 28, 29, 1941; minimum daily, 0.7 cfs Nov. 29, 1941.

Flood in August 1901 reached a stage of 28.75 ft, from floodmarks, about a quarter of a mile upstream (discharge, 30,000 cfs).

Remarks.--Large diurnal fluctuation caused by powerplants above station. Flow slightly regulated by High Point Lake and small powerplant reservoirs. During the period 1951-60, the town of Asheboro diverted an average of 1.3 cfs from Pee Dee River basin into this basin above station. Records of chemical analyses for the period October 1956 to September 1957 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	74.7	72.8	175	130	210	274	547	76.9	400	77.8	67.5	28.0	176
1952	17.2	41.2	519	505	628	1,626	408	266	111	51.4	342	431	413
1953	56.0	247	405	779	1,177	746	383	164	351	63.7	37.4	34.4	365
1954	24.3	27.0	142	944	197	527	392	158	68.9	39.7	68.6	17.7	218
1955	913	146	524	213	724	278	529	151	60.8	145	630	222	†377
1956	253	110	82.2	86.9	760	479	341	251	79.7	59.1	32.4	306	234
1957	162	163	335	303	1,096	488	512	113	195	165	87.8	139	308
1958	142	686	379	602	367	996	770	136	214	179	50.4	430	430
1959	54.0	64.4	338	359	530	290	837	179	274	358	534	477	356
1960	899	322	413	720	1,610	1,025	845	317	127	138	539	180	591

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.25	0.23	0.58	0.43	0.63	0.91	1.76	0.26	1.29	0.26	0.22	0.09	6.91
1952	.06	.13	1.73	1.68	1.96	5.42	1.31	.89	.36	.17	1.14	1.39	16.24
1953	.19	.80	1.35	2.60	3.54	2.49	1.23	.55	1.13	.21	.12	.11	14.32
1954	.08	.09	.47	3.15	.59	1.76	1.26	.52	.22	.13	.23	.06	8.56
1955	3.04	.47	1.75	.71	2.18	.93	1.70	.50	.20	.48	2.10	.72	14.78
1956	.84	.35	.27	.29	2.37	1.60	1.10	.84	.26	.20	.11	.99	9.22
1957	.54	.53	1.12	1.01	3.30	1.63	1.65	.38	.63	.55	.29	.45	12.08
1958	.47	2.21	1.26	2.21	1.81	1.22	3.21	2.57	.44	.71	.60	.16	16.87
1959	.18	.21	1.13	1.20	1.59	.97	2.70	.60	.88	1.19	1.78	1.54	13.97
1960	2.99	1.04	1.37	2.40	5.02	3.42	2.72	1.06	.41	.46	1.80	.58	23.27

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	200	7.83
1951	1203	12,100	June 18, 1951	4.7	176	0.509	6.91	198	7.77
1952	1233	22,400	Mar. 4, 1952	3.7	413	1.19	16.24	423	16.66
1953	1273	10,100	Feb. 15, 1953	6.8	365	1.05	14.32	322	12.62
1954	1333	11,600	Jan. 22, 1954	6.0	218	.630	8.56	336	13.18
1955	1383	34,000	Oct. 15, 1954	7.7	†377	1.09	14.78	280	10.98
1956	1433	9,300	Mar. 16, 1956	11	234	.676	9.22	252	9.95
1957	1503	13,700	Feb. 1, 1957	16	308	.890	12.08	353	13.85
1958	1553	9,780	Jan. 25, 1958	19	430	1.24	16.87	368	14.45
1959	1623	12,200	Apr. 20, 1959	22	356	1.03	13.97	455	17.85
1960	1703	20,400	Aug. 22, 1960	27	591	1.71	23.27	-	-

† Corrected.

1010. Bear Creek at Robbins, N. C.

Location.--Lat 35°26', long 79°35', on right bank 0.2 mile west of post office in Robbins, Moore County, and a quarter of a mile downstream from Cabin Creek.

Drainage area.--134 sq mi.

Records available.--November 1939 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 322.58 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by North Carolina State Highway Commission). Prior to Mar. 6, 1958, water-stage recorder at site 800 ft upstream at datum 0.65 ft higher; Mar. 6, 1958, to Dec. 11, 1959, staff and crest-stage gages at present site and datum.

Average discharge.--21 years (1939-60), 151 cfs.

Extremes.--1939-60: Maximum discharge, 43,600 cfs July 20, 1956 (gage height, 34.57 ft, from floodmarks, site and datum then in use), from rating curve extended above 7,000 cfs on basis of slope-area measurements of peak flow at gage heights 27.52 and 34.57 ft at former site; no flow Oct. 2, 22-27, 1941 (result of storage of flow in gage pool after construction of new station control); minimum unregulated flow, 0.1 cfs Oct. 21, 22, 1941, Oct. 12-15, 1954.

Remarks.--About 0.6 cfs diverted by town of Robbins for municipal water supply beginning Mar. 6, 1958, when gage was relocated. Records of chemical analyses for the period October 1955 to September 1956 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	56.5	33.6	134	83.8	95.7	162	221	51.1	45.7	31.5	61.6	28.9	83.5
1952	7.59	39.1	162	194	290	637	174	143	95.4	32.6	336	207	193
1953	35.2	130	130	223	369	397	221	85.0	77.6	32.5	11.1	74.4	147
1954	12.5	13.7	95.5	464	131	221	191	69.1	53.0	22.6	12.2	1.27	108
1955	510	31.1	91.6	88.7	329	162	169	37.5	41.2	141	123	218	161
1956	105	61.0	34.3	40.1	255	249	159	122	20.4	700	64.7	159	164
1957	70.6	49.5	169	82.1	288	208	75.6	90.6	191	34.4	50.8	103	117
1958	38.2	420	208	592	301	224	571	235	64.9	105	42.1	10.5	219
1959	38.9	25.9	143	127	281	247	535	103	202	128	35.9	61.2	159
1960	113	94.0	114	368	618	504	375	137	70.3	44.1	37.0	42.2	208

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.49	0.28	1.15	0.72	0.74	1.39	1.84	0.44	0.38	0.27	0.53	0.22	8.45
1952	.07	.33	1.39	1.67	2.33	5.48	1.45	1.23	.79	.28	2.89	1.72	19.63
1953	.30	1.08	1.12	1.92	2.87	3.41	1.84	.73	.65	.28	.10	.62	14.92
1954	.11	.11	.82	3.99	1.02	1.90	1.59	.59	.44	.19	.11	.01	10.88
1955	4.39	.26	.79	.76	2.56	1.40	1.41	.32	.34	1.21	1.06	1.81	16.31
1956	.91	.51	.29	.35	2.05	2.15	1.33	1.05	.17	6.02	.56	1.32	16.71
1957	.61	.41	1.45	.71	2.24	1.79	.63	.78	1.59	.30	.44	.86	11.81
1958	.59	3.49	1.79	3.38	2.34	1.93	4.76	2.03	.54	.69	.36	.09	22.19
1959	.33	.22	1.23	1.09	2.18	2.13	4.45	.89	1.68	1.10	.31	.51	16.12
1960	.97	.78	.98	3.16	4.97	4.34	3.12	1.18	.59	.38	.32	.35	21.14

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	132	13.34
1951	1203	3,960	Apr. 8, 1951	6	83.5	0.623	8.45	82.2	8.32
1952	1233, 1433	19,500	Aug. 31, 1952	2.5	193	1.44	19.63	200	20.37
1953	1273	5,460	Feb. 15, 1953	3.3	147	1.10	14.92	133	13.46
1954	1333	6,590	Jan. 22, 1954	.4	108	.806	10.88	151	15.28
1955	1383	29,500	Oct. 15, 1954	.1	161	1.20	16.31	124	12.58
1956	1433	43,600	July 20, 1956	3.2	164	1.22	16.71	172	17.47
1957	1503	3,100	Feb. 28, 1957	3.3	117	1.873	11.81	150	15.21
1958	1553	6,300	Apr. 6, 1958	6.0	219	1.63	22.19	179	18.10
1959	1623	5,980	Apr. 20, 1959	7.5	159	1.19	16.12	169	17.07
1960	1703	6,230	Jan. 31, 1960	12	208	1.55	21.14	-	-

1018. Tick Creek near Mount Vernon Springs, N. C.

Location.--Lat 35°40', long 79°24', on right bank 150 ft upstream from bridge on paved road, three-quarters of a mile downstream from bridge on U.S. Highway 421, 1½ miles east of Mount Vernon Springs, Chatham County, and 4 miles upstream from mouth.

Drainage area.--15.3 sq mi.

Records available.--June 1958 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 455 ft (by barometer).

Extremes.--1958-60: Maximum discharge, 1,940 cfs July 10, 1959 (gage height, 7.97 ft); minimum, 0.05 cfs July 18-21, Sept. 6-10, 1960.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	-	-	-	8.04	12.3	1.10	-
1959	1.93	1.74	16.1	11.4	25.9	18.3	45.2	6.65	2.83	56.6	4.63	2.65	16.1
1960	8.14	14.3	17.6	39.2	81.0	57.3	48.3	7.73	1.94	1.50	1.31	.168	23.0

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	-	-	-	0.61	0.93	0.08	-
1959	0.15	0.13	1.22	0.86	1.76	1.38	3.30	0.50	0.21	4.26	.35	.19	14.31
1960	.61	1.04	1.32	2.96	5.71	4.31	3.52	.58	.14	.11	.10	.01	20.41

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1958	1623	11,110	Aug. 23, 1958	60.4	-	-	-	-	-
1959	1623	1,940	July 10, 1959	.2	16.1	1.05	14.31	17.8	15.78
1960	1703	985	Apr. 6, 1960	.05	23.0	1.50	20.41	-	-

a Maximum during period June 13 to Sept. 30.

b Minimum during period June 13 to Sept. 30.

1020. Deep River at Moncure, N. C.

Location.--Lat 35°36', long 79°05', on right bank $1\frac{1}{2}$ miles northwest of Moncure, Chatham County, $2\frac{1}{4}$ miles downstream from Rocky River, and $4\frac{1}{2}$ miles upstream from confluence with Haw River.

Drainage area.--1,410 sq mi, approximately.

Records available.--July 1930 to September 1960. Records for May 1898 to December 1899 published in 21st Annual Report, Part 4, and in Bulletins 34 and 39 of North Carolina Department of Conservation and Development have been found to be unreliable and should not be used.

Gage.--Water-stage recorder. Datum of gage is 185.06 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--30 years (1930-60), 1,455 cfs.

Extremes.--1930-60: Maximum discharge, 80,300 cfs Sept. 18, 1945 (gage height, 17.20 ft), from rating curve extended above 66,000 cfs; minimum, 5.5 cfs Oct. 10, 1954 (gage height, 0.35 ft).

Remarks.--Diurnal fluctuation and some regulation at low flow caused by small powerplants above station. Records of chemical analyses and water temperatures for the period October 1955 to September 1956 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	313	210	907	618	801	1,525	2,611	368	618	270	312	78.4	717
1952	49.5	133	1,523	1,901	2,744	7,103	1,612	1,181	524	211	1,702	2,550	1,752
1953	240	1,832	1,134	3,710	4,397	4,402	1,681	790	850	239	139	386	1,632
1954	81.7	78.6	796	4,860	1,255	2,249	1,983	796	275	151	126	85.3	1,065
1955	2,758	334	1,432	873	3,225	1,539	1,659	416	270	872	1,947	2,123	1,443
1956	1,124	430	292	295	2,780	2,549	1,531	964	364	1,223	304	1,177	1,079
1957	1,543	604	1,854	775	3,989	2,928	1,175	798	2,001	665	1,079	771	1,499
1958	955	3,838	2,504	3,948	3,075	2,360	4,802	3,540	458	816	427	108	2,211
1959	204	175	1,065	1,190	2,556	1,685	4,872	816	1,094	2,357	964	1,262	1,508
1960	1,946	1,173	1,041	2,558	7,945	4,599	4,285	1,293	474	331	670	302	2,225

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.26	0.17	0.74	0.50	0.59	1.25	2.07	0.30	0.49	0.22	0.26	0.06	6.91
1952	.04	.10	1.08	1.56	2.10	5.81	1.28	.97	.41	.17	1.39	2.00	16.91
1953	.20	1.45	.93	3.03	3.25	3.60	1.33	.64	.67	.20	.11	.31	15.72
1954	.07	.06	.65	3.97	1.93	1.84	1.57	.65	.22	.12	.10	.07	10.25
1955	2.26	.26	1.17	.71	2.38	1.26	1.51	.34	.21	.71	1.59	1.68	13.88
1956	.92	.34	.24	.24	2.13	2.08	1.21	.79	.29	1.00	.25	.93	10.42
1957	1.26	.48	1.52	.63	2.95	2.39	.93	.65	1.58	.54	.88	.61	14.42
1958	.78	3.04	1.88	3.23	2.27	1.93	5.80	2.89	.36	.67	.35	.09	21.29
1959	.17	.14	.87	.97	1.89	1.38	3.86	.67	.87	1.93	.79	1.00	14.54
1960	1.59	.93	1.15	2.09	6.08	3.76	3.39	1.06	.38	.27	.55	.24	21.49

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,080	10.40
1951	1203	15,200	Apr. 8, 1951	34	717	0.509	6.91	723	6.96
1952	1233	43,700	Mar. 4, 1952	19	1,752	1.24	16.91	1,891	18.27
1953	1273	22,200	Mar. 24, 1953	39	1,632	1.16	15.72	1,445	13.92
1954	1333	27,500	Jan. 23, 1954	40	1,065	.755	10.25	1,367	13.16
1955	1383	26,800	Oct. 16, 1954	6	1,443	1.02	13.88	1,216	11.69
1956	1433	22,200	Mar. 16, 1956	72	1,079	.765	10.42	1,261	12.18
1957	1503	17,800	Mar. 1, 1957	72	1,499	1.06	14.42	1,753	16.86
1958	1553	20,600	Apr. 30, 1958	60	2,211	1.57	21.29	1,741	16.77
1959	1623	32,100	July 10, 1959	48	1,508	1.07	14.54	1,766	17.03
1960	1703	22,700	Feb. 1, Apr. 5	104	2,225	1.58	21.49	-	-

1025. Cape Fear River at Lillington, N. C.

Location.--Lat 35°24', long 78°49', near right bank in downstream end of pier of downstream bridge on U.S. Highway 401 (revised), 1,800 ft downstream from Norfolk Southern Railway bridge, 0.5 mile north of Lillington, Harnett County, and 1 mile downstream from Neal Creek (formerly known as Neill Creek).

Drainage area.--3,440 sq mi, approximately.

Records available.--December 1923 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 104.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 8, 1927, chain gage at same site and datum.

Average discharge.--36 years (1924-60), 3,368 cfs.

Extremes.--1923-60: Maximum discharge uncertain, occurred Sept. 19, 1945 (gage height, 33.19 ft, from floodmark); minimum, 11 cfs Oct. 14, 15, 1954 (gage height, -0.17 ft).

Remarks.--Large diurnal fluctuation and considerable regulation at low flow caused by powerplants above station. Records of chemical analyses for the period October 1954 to September 1955 and water temperatures for the periods October 1954 to September 1955, June 1959 to September 1960 are published in reports of the Geological Survey.

Revisions.--One day in the water year 1929 was revised in WSP 1703; the resulting revised records as summarized herewith supersede those published in WSP 1303:

Month	Mean	Per square mile	Runoff in inches
February 1929.....	7,566	-	2.29
Water year 1928-29.....	4,217	1.23	16.65
Calendar year 1929.....	5,881	-	23.21

Correction.--In WSP 1303, the runoff in inches for July 1944 was listed in error; it should be 1.33 in.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	899	629	2,181	1,440	2,025	3,209	5,892	922	1,249	592	743	170	1,656
1952	115	353	3,274	4,412	6,246	15,020	3,934	2,427	990	512	2,714	6,582	3,879
1953	604	4,291	2,595	8,533	9,656	9,353	3,980	1,682	1,689	522	254	525	3,602
1954	184	175	1,804	10,600	2,819	4,957	4,209	1,906	690	373	279	150	2,351
1955	4,872	1,002	3,482	1,935	6,768	3,340	3,750	1,055	478	1,420	4,684	4,690	3,100
1956	2,067	1,018	671	698	6,705	5,787	3,775	2,259	1,079	2,055	666	2,042	2,382
1957	3,492	1,796	3,916	1,818	9,604	6,793	3,040	1,716	3,536	1,401	2,244	2,006	3,406
1958	2,373	7,981	5,577	8,434	6,533	5,504	9,901	8,605	1,275	1,580	1,085	300	4,916
1959	691	540	2,634	3,101	5,552	3,469	10,650	1,721	2,140	3,793	1,914	2,911	3,232
1960	6,529	3,050	3,597	5,108	17,170	10,140	9,480	2,861	995	1,066	2,092	1,046	5,214

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.30	0.20	0.73	0.48	0.61	1.08	1.91	0.31	0.41	0.20	0.25	0.06	6.54
1952	.04	.11	1.10	1.48	1.96	5.03	1.28	.81	.32	.17	.91	2.13	15.34
1953	.20	1.39	.87	2.86	2.92	3.13	1.29	.56	.55	.17	.09	.17	14.20
1954	.05	.06	.60	3.55	.85	1.66	1.37	.64	.22	.13	.09	.05	9.27
1955	1.63	.32	1.17	.65	2.05	1.12	1.22	.35	.15	.48	1.57	1.52	12.23
1956	.69	.33	.23	.23	2.10	1.94	1.22	.76	.35	.69	.22	.66	9.42
1957	1.17	.58	1.51	.61	2.91	2.28	.99	.58	1.15	.47	.75	.65	13.45
1958	.80	2.59	1.87	2.83	1.98	1.84	3.21	2.88	.41	.53	.36	.10	19.40
1959	.23	.18	.88	1.04	1.68	1.16	3.45	.58	.69	1.27	.64	.94	12.74
1960	2.19	.99	1.21	1.71	5.38	3.40	3.07	.96	.32	.36	.70	.34	20.63

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1203	34,000	Apr. 9, 1951	60	1,656	0.481	6.54	2,294	9.05
1952	1253	77,100	Mar. 5, 1952	55	3,879	1.13	15.34	1,680	6.56
1953	1273	44,100	Feb. 16, 1953	61	3,602	1.05	14.20	4,186	16.55
1954	1333	56,500	Jan. 23, 1954	62	2,351	.683	9.27	3,159	12.45
1955	1383	49,900	Oct. 17, 1954	11	3,100	.901	12.23	2,961	11.68
1956	1433	46,500	Mar. 17, 1956	82	2,382	.692	9.42	2,624	10.36
1957	1503	41,800	Feb. 2, 1957	128	3,406	.990	13.45	2,841	11.23
1958	1553	46,500	Nov. 26, 1957	103	4,916	1.43	19.40	3,960	15.65
1959	1623	40,000	Apr. 20, 1959	154	3,232	.940	12.74	3,912	15.43
1960	1703	47,500	Apr. 6, 1960	192	5,214	1.52	20.63	4,016	15.84

1035. Little River at Linden, N. C.

Location (revised).--Lat 35°15'46", long 78°46'35", on left bank 10 ft downstream from bridge on U.S. Highway 401, 1.6 miles west of Linden, Cumberland County, 2 miles upstream from Stewart Creek, and 4½ miles upstream from mouth.

Drainage area.--460 sq mi.

Records available.--November 1928 to September 1960. Prior to October 1950, published as Lower Little River at Linden.

Gage.--Water-stage recorder. Datum of gage is 73.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Aug. 27, 1934, chain gage at same site and datum. Since June 18, 1948, auxiliary wire-weight gage 2¼ miles downstream read during periods of backwater.

Average discharge.--31 years (1929-60), 557 cfs.

Extremes.--1928-60: Maximum discharge, 13,500 cfs Sept. 18, 1945, during period of backwater from Cape Fear River; maximum gage height, 41.47 ft Sept. 19 or 20, 1945 (from floodmark); minimum discharge, 26 cfs Oct. 14, 1940.

Flood of Sept. 21, 1928, reached a stage of 37.3 ft, from floodmark; maximum discharge, 13,000 cfs Sept. 20 or 21.

Remarks.--Records of chemical analyses for the period October 1954 to September 1955 are published in report of the Geological Survey.

Revisions.--The momentary maximum discharge for the water year 1932 published in WSP 1303 has been revised to 3,590 cfs Jan. 10, 1932.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	252	196	361	339	324	596	605	234	140	121	131	73.3	264
1952	62.6	132	217	299	755	1,181	625	493	173	134	456	927	453
1953	186	574	497	902	1,114	1,237	593	511	186	143	82.4	119	509
1954	98.2	115	484	1,343	696	688	886	366	355	133	78.7	52.2	438
1955	396	272	511	517	695	500	587	248	126	335	914	1,344	535
1956	379	332	251	292	810	870	714	653	316	283	251	240	448
1957	507	546	413	801	1,268	480	711	627	142	180	381	538	538
1958	662	1,479	1,225	1,197	1,024	1,034	1,209	1,156	331	220	200	107	819
1959	453	264	385	686	1,131	952	1,701	640	413	1,256	684	554	757
1960	1,208	716	633	982	1,954	1,401	1,136	528	232	250	343	405	812

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.63	0.48	0.90	0.85	0.73	0.99	1.47	0.59	0.34	0.30	0.33	0.18	7.79
1952	.16	.32	.54	.75	1.77	2.96	1.52	1.24	.42	.34	1.14	2.25	13.41
1953	.47	1.39	1.25	2.26	2.52	3.10	1.44	1.28	.45	.36	.21	.29	15.02
1954	.25	.28	1.21	3.37	1.58	1.73	2.15	.92	.81	.33	.20	.13	12.96
1955	.99	.66	1.28	1.30	1.57	1.25	1.42	.62	.31	.84	2.29	3.26	15.79
1956	.95	.80	.63	.73	1.90	2.18	1.73	1.64	.77	.71	.63	.58	13.25
1957	1.51	1.23	1.37	1.03	1.36	3.17	1.16	1.78	1.52	.36	.45	.92	15.86
1958	1.86	3.59	3.07	3.00	2.32	2.59	2.93	2.90	.80	.55	.50	.26	24.17
1959	1.14	.64	.96	1.72	2.56	2.39	4.13	1.60	1.00	3.15	1.72	1.34	22.35
1960	3.03	1.74	1.59	2.46	4.58	3.51	2.76	1.32	.56	.63	.86	.98	24.02

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	380	11.20
1951	1203	1,500	Apr. 10, 1951	42	264	0.574	7.79	230	6.80
1952	1233	5,860	Sept. 1, 1952	43	453	.985	13.41	523	15.50
1953	1273	2,610	Mar. 14, 1953	48	509	1.11	15.02	462	13.65
1954	1333	5,770	Jan. 23, 1954	40	438	.952	12.96	479	14.15
1955	1383	5,370	Sept. 4, 1955	41	535	1.16	15.79	517	15.24
1956	1433	2,590	Mar. 19, 1956	54	448	.974	13.25	506	14.98
1957	1503	3,310	Mar. 1, 1957	59	538	1.17	15.86	681	20.07
1958	1553	4,340	Nov. 26, 1957	84	819	1.78	24.17	630	18.59
1959	1623	4,320	Apr. 13, 1959	94	757	1.65	22.35	880	25.97
1960	1703	5,180	Feb. 14, 1960	81	812	1.77	24.02	-	-

CAPE FEAR RIVER BASIN

1045. Rockfish Creek near Hope Mills, N. C.

Location.--Lat 34°57'57", long 78°55'04", on left bank 150 ft upstream from bridge on U.S. Highway 301 (bridge relocated), at mouth of Little Rockfish Creek, $1\frac{1}{2}$ miles east of town of Hope Mills, Cumberland County, and $5\frac{1}{4}$ miles upstream from mouth. Records include flow of Little Rockfish Creek.

Drainage area.--284 sq mi, includes that of Little Rockfish Creek.

Records available (revised).--October 1902 to June 1903 (gage heights only), November 1928 to December 1931, February 1939 to December 1954. Published as "near Brunt" 1902-3 and as "near Fayetteville" 1928-31.

Gage.--Water-stage recorder. Datum of gage is 52.25 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Feb. 23, 1939, wire or chain gages at sites 4 miles downstream at different datums. June 18, 1948, to Dec. 31, 1954, auxiliary wire-weight gage 4 miles downstream.

Average discharge.--17 years (1929-31, 1939-54), 377 cfs.

Extremes.--1928-31, 1939-54: Maximum discharge, 8,000 cfs Sept. 18, 1945 (gage height, 31.75 ft), from rating curve extended above 4,500 cfs on basis of computation of peak flow over dams, three-quarters of a mile upstream on Rockfish Creek and $1\frac{1}{2}$ miles upstream on Little Rockfish Creek; minimum, 2.6 cfs Oct. 24, Nov. 22, 23, 1941; minimum daily, 2.8 cfs Nov. 23, 1941.

Remarks.--Large diurnal fluctuation and considerable regulation caused by mills and reservoirs above station. Records of chemical analyses for the period October 1953 to September 1954 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	340	276	314	318	285	306	335	196	239	212	207	182	267
1952	160	215	242	257	358	554	365	266	201	170	557	490	303
1953	268	341	333	404	463	602	395	482	275	260	183	194	350
1954	188	206	392	494	425	428	530	318	244	160	134	112	302
1955	340	231	346	-	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.38	1.08	1.27	1.29	1.04	1.24	1.32	0.80	0.94	0.86	0.84	0.71	12.77
1952	.65	.85	.98	1.04	1.36	2.25	1.43	1.08	.79	.69	1.45	1.92	14.49
1953	1.09	1.34	1.35	1.64	1.70	2.44	1.55	1.96	1.08	1.05	.74	.76	16.70
1954	1.76	.81	1.59	2.00	1.56	1.74	2.08	1.29	.96	.65	.54	.44	14.42
1955	1.38	.91	1.40	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	339	16.21
1951	1203	1,050	Oct. 23, 1950	20	267	0.940	12.77	241	11.52
1952	1233	3,590	Sept. 1, 1952	26	303	1.07	14.49	330	15.79
1953	1273	1,670	May 2, 1953	36	350	1.23	16.70	337	16.08
1954	1333	1,290	Jan. 23, 1954	21	302	1.06	14.42	313	14.95
1955	1333	a2,330	Oct. 17, 1954	b21	-	-	-	-	-

a Maximum during period October to December.

b Minimum during period October to December.

1055. Cape Fear River at lock 3, near Tarheel, N. C.

Location.--Lat 34°50'05", long 78°49'27" (revised), on right bank 100 ft upstream from lock 3, 1 mile downstream from county line, 7 miles north of Tarheel, Bladen County, 9 miles upstream from Philips Creek, and at mile 95.

Drainage area.--4,810 sq mi, approximately.

Records available.--October 1937 to September 1960.

Gage.--Water-stage recorder and concrete lock and dam control. Datum of gage is 28,968 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Jan. 8, 1939, staff gage on upper lock wall 100 ft downstream at same datum. Auxiliary water-stage recorder 1.8 miles downstream; prior to Jan. 14, 1943, auxiliary staff gage 400 ft downstream on lower end of lock wall; Jan. 14, 1943, to Sept. 30, 1953, auxiliary water-stage recorder at site 600 ft downstream.

Average discharge.--23 years (1937-60), 4,986 cfs.

Extremes.--1937-60: Maximum gage height, 43.44 ft Sept. 22, 1945 (discharge not determined); minimum discharge, 170 cfs Sept. 20, 1954; minimum daily, 208 cfs Sept. 13, 1954.

Remarks.--Slight diurnal fluctuation and some regulation for short periods at low flow caused by powerplants above station. Records of chemical analyses and water temperatures for the period October 1954 to September 1955 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,787	1,300	3,231	2,483	3,019	4,356	7,768	1,559	1,748	1,145	1,337	600	2,520
1952	434	790	3,791	4,990	8,499	19,580	5,560	3,750	1,542	910	3,652	9,904	5,275
1953	1,186	5,502	3,727	11,180	13,310	12,890	5,645	3,300	2,242	1,069	620	897	5,081
1954	567	614	3,069	13,590	4,682	6,711	7,024	3,087	1,554	918	566	410	3,570
1955	5,651	1,610	4,833	3,321	8,653	4,816	5,204	1,743	982	2,739	7,744	9,269	4,686
1956	3,241	2,117	1,575	1,646	8,937	8,014	5,760	3,789	1,926	2,995	1,590	2,647	3,664
1957	5,034	3,129	5,328	2,780	11,140	10,950	4,464	3,222	5,342	1,872	2,755	2,574	4,842
1958	4,675	10,580	9,607	12,080	8,463	9,253	12,080	13,010	2,530	2,501	1,820	800	7,282
1959	1,995	1,348	3,457	5,432	9,029	6,282	15,630	3,561	3,642	7,162	4,125	4,689	5,492
1960	10,030	5,013	5,657	7,875	22,970	13,210	13,190	4,376	1,672	2,132	3,845	2,780	7,668

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.43	0.30	0.77	0.60	0.65	1.04	1.80	0.37	0.41	0.27	0.32	0.14	7.10
1952	.10	.18	.91	1.20	1.91	4.69	1.29	.90	.36	.22	.88	2.30	14.94
1953	.28	1.28	.89	2.68	2.88	3.09	1.31	.79	.52	.26	.15	.21	14.34
1954	.14	.14	.74	3.26	1.01	1.61	1.63	.74	.36	.22	.14	.10	10.09
1955	1.35	.37	1.16	.80	1.87	1.15	1.21	.42	.23	.66	1.86	2.15	13.23
1956	.78	.49	.38	.39	2.00	1.92	1.34	.91	.45	.72	.38	.61	10.37
1957	1.21	.73	1.28	.67	2.41	2.62	1.04	.77	1.24	.45	.66	.60	13.68
1958	1.12	2.45	2.30	2.90	1.83	2.22	2.80	3.12	.59	.60	.44	.19	20.56
1959	.48	.31	.83	1.30	1.95	1.51	3.63	.85	.84	1.72	.99	1.09	15.50
1960	2.40	1.16	1.36	1.89	5.15	3.17	3.06	1.05	.39	.51	.92	.64	21.70

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	3,465	9.78
1951	1203	31,400	Apr. 10, 1951	428	2,520	0.524	7.10	2,411	6.79
1952	1233	70,600	Mar. 6, 1952	302	5,275	1.10	14.94	5,719	16.20
1953	1273	41,000	Feb. 16, 1953	275	5,081	1.06	14.34	4,570	12.91
1954	1333	52,000	Jan. 24, 1954	208	3,570	.742	10.09	4,233	11.95
1955	1383	53,000	Sept. 4, 1955	222	4,686	.974	13.23	4,247	12.00
1956	1433	36,800	Mar. 18, 1956	392	3,664	.762	10.37	4,217	11.94
1957	1503	37,000	Mar. 27, 1957	534	4,842	1.01	13.68	5,787	16.33
1958	1553	43,800	Nov. 27, 1957	480	7,282	1.51	20.56	5,773	16.31
1959	1623	41,500	Apr. 14, 1959	610	5,492	1.14	15.50	6,662	18.80
1960	1703	41,200	Apr. 6, 1960	590	7,668	1.59	21.70	-	-

CAPE FEAR RIVER BASIN

1059. Hood Creek near Leland, N. C.

Location.--Lat 34°16'43", long 78°07'34", on right bank at bridge on U.S. Highways 74 and 78, 0.4 mile downstream from Pasture Pond Branch, 1 mile southeast of Maco, and 4½ miles northeast of Leland, Brunswick County.

Drainage area.--21.6 sq mi.

Records available.--Water years 1953-56 (annual maximum), November 1956 to September 1960. Occasional base-flow measurements, water years 1950-56.

Gage.--Water-stage recorder. Altitude of gage is 15 ft (from topographic map). Nov. 5, 1952, to Nov. 27, 1956, crest-stage gage at same site at datum 9.79 ft higher.

Extremes.--1952-60: Maximum discharge, 2,050 cfs Sept. 20, 1955 (gage height, 10.39 ft), from rating curve extended above 650 cfs.

1956-60: Minimum discharge, 0.05 cfs several days in August and September 1957, June and July 1960.

A field estimate of 0.01 cfs was made on Aug. 26, 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	9.95	11.5	96.7	17.8	3.65	46.0	0.729	0.155	21.4	-
1958	29.1	11.1	55.4	61.8	38.5	63.2	107	17.0	32.1	10.5	49.7	63.8	44.9
1959	67.7	15.0	43.6	46.6	58.5	111	23.2	7.07	3.70	59.6	34.1	39.8	42.6
1960	40.0	52.6	47.8	37.3	74.8	91.3	85.6	7.64	.322	23.1	43.2	*75.1	*48.0

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	0.45	0.53	0.56	5.16	0.92	0.19	2.38	0.04	0.008	1.10	-
1958	1.55	0.57	2.95	3.30	1.86	3.37	5.51	.91	1.66	.56	2.65	3.30	28.19
1959	3.61	.78	2.33	2.49	2.82	5.90	1.20	.38	.19	3.18	1.82	2.06	26.76
1960	2.14	2.72	2.55	1.99	3.73	4.87	4.42	.41	.02	1.23	2.30	*3.88	*30.26

* Revised.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	1623	246	Mar. 12 or 13	-	-	-	-	-	-
1954	1623	240	Jan. 23, 1954	-	-	-	-	-	-
1955	1623	2,050	Sept. 20, 1955	-	-	-	-	-	-
1956	1623	600	May 10, 1956	-	-	-	-	-	-
1957	1503	620	Sept. 30, 1957	-	-	-	-	25.4	15.96
1958	1553	1,260	Sept. 28, 1958	0.3	44.9	2.08	28.19	47.5	29.84
1959	1623	780	Mar. 6, 1959	.1	42.6	1.97	26.76	43.7	27.45
1960	1703	1,140	Sept. 12, 1960	.05	*48.0	*2.22	*30.26	-	-

* Revised.

1060. Little Coharie Creek near Roseboro, N. C.

Location.--Lat 34°57'13", long 78°29'17", on downstream end of center pier of bridge on State Highway 24, 1½ miles east of Roseboro, Sampson County, and 1½ miles upstream from Bearskin Swamp.

Drainage area.--96.4 sq mi.

Records available.--January 1950 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 81 ft (estimated from description of previously destroyed bench mark at site). Prior to Jan. 12, 1951, wire-weight gage at same site and datum.

Average discharge.--10 years (1950-60), 108 cfs.

Extremes.--1950-60: Maximum discharge, 1,860 cfs Sept. 6, 1955 (gage height, 9.00 ft); minimum, 0.1 cfs Sept. 13, 14, 27, Oct. 1-11, 1954.

Flood in 1924 reached a stage of 11.6 ft from information furnished by North Carolina State Highway Commission.

Remarks.--Records of chemical analyses for the period October 1952 to September 1953 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	48.1	31.5	53.3	55.9	45.4	63.0	67.5	37.5	7.73	64.8	171	23.9	56.2
1952	19.7	39.8	74.1	77.2	160	333	119	94.9	39.3	6.00	73.3	38.3	89.5
1953	17.1	51.0	44.6	88.6	121	155	50.6	139	29.3	8.91	2.39	14.1	59.9
1954	11.0	28.5	74.5	192	111	111	156	42.5	27.4	10.3	2.96	.807	63.7
1955	8.33	19.6	74.8	95.0	137	111	95.6	27.5	29.0	71.6	328	465	121
1956	97.9	85.9	79.0	74.2	173	164	114	104	39.2	87.7	61.8	40.0	93.3
1957	78.9	77.3	88.9	76.6	99.1	228	101	84.5	178	21.0	7.79	57.0	91.4
1958	96.0	194	308	319	213	234	229	213	90.4	51.0	34.3	11.4	166
1959	63.2	35.9	55.2	94.8	199	252	322	48.9	98.6	286	196	146	149
1960	197	163	206	267	426	284	160	45.3	38.7	124	159	223	190

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.58	0.36	0.64	0.67	0.49	0.75	0.78	0.45	0.09	0.78	2.05	0.28	7.92
1952	.24	.46	.89	.92	1.79	3.99	1.37	1.14	.45	.07	.88	.44	†12.64
1953	.20	.59	.53	1.06	1.31	1.85	.59	1.66	.34	.11	.03	.16	8.43
1954	.13	.33	.89	2.30	1.20	1.32	1.81	.51	.32	.12	.04	.009	8.98
1955	.10	.23	.89	1.11	1.48	1.33	1.11	.33	.34	.86	3.93	5.38	17.09
1956	1.17	.99	.94	.89	1.93	1.97	1.32	1.25	.45	1.05	.74	.46	13.16
1957	.94	.90	1.06	.92	1.07	2.73	1.17	1.01	2.06	.25	.09	.66	12.86
1958	1.15	2.24	3.69	3.81	2.30	2.80	2.66	2.54	1.05	.61	.41	.13	23.39
1959	.76	.42	.66	1.13	2.15	3.01	3.73	.59	1.14	3.43	2.35	1.69	21.06
1960	2.36	1.89	2.46	3.19	4.76	3.39	1.85	.54	.45	1.48	1.91	2.58	26.86

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	1203	a553	July 29, 1950	b4.2	-	-	-	51.3	7.23
1951	1203	542	Aug. 9, 1951	3.8	56.2	0.583	7.92	56.2	7.93
1952	1253	569	Mar. 27, 1952	1.3	89.5	.928	†12.64	87.7	12.37
1953	1273	379	May 10, 1953	.5	59.9	.621	8.43	60.0	8.46
1954	1333	596	Jan. 26, 1954	.1	65.7	.661	8.98	62.8	8.85
1955	1383	1,860	Sept. 6, 1955	.1	121	1.26	17.09	135	18.97
1956	1433	271	May 8, 1956	8.2	93.3	.968	13.16	91.8	12.96
1957	1503	570	June 10, 1957	3.1	91.4	.948	12.86	121	17.04
1958	1553	570	Jan. 17, 1958	6.0	166	1.72	23.39	129	18.15
1959	1623	1,260	Aug. 1, 1959	8.0	149	1.55	21.06	184	25.93
1960	1703	1,550	July 30, 1960	9.7	190	1.97	26.86	-	-

† Corrected.

a Maximum observed during period January to September.

b Minimum during period January to September.

1065. Black River near Tomahawk, N. C.

Location.--Lat 34°45'17", long 78°17'21", near center of span on downstream side of bridge on State Highway 411, a quarter of a mile downstream from Clear Run Swamp and $3\frac{1}{4}$ miles northeast of Tomahawk, Sampson County.

Drainage area.--680 sq mi.

Records available.--October 1951 to September 1960.

Gage.--Wire-weight gage. Datum of gage is 0.39 ft below mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--9 years (1951-60), 722 cfs.

Extremes.--1951-60: Maximum discharge, 7,510 cfs Aug. 2, 1960 (gage height, 44.48 ft); minimum, 8.5 cfs Oct. 13, 1954 (gage height, 25.59 ft). Flood in 1928 reached a stage of 47.0 ft (discharge, 11,400 cfs) and floods of 1945 and 1948 reached a stage of 42.6 ft (discharge, 5,420 cfs), from information furnished by North Carolina State Highway Commission.

Remarks.--Records of chemical analyses for the period October 1952 to September 1953 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	69.4	192	375	430	835	1,535	650	579	165	90.6	388	203	459
1953	98.6	265	310	580	843	1,059	384	540	440	76.7	69.3	74.1	392
1954	63.4	124	440	981	663	708	1,110	274	117	86.0	25.2	13.4	382
1955	29.6	77.1	248	413	599	539	450	144	116	495	2,156	5,319	713
1956	700	471	456	460	1,109	1,003	768	977	301	503	415	284	620
1957	545	436	435	439	544	1,481	636	383	1,179	104	78.1	229	540
1958	451	869	2,092	2,069	1,431	1,626	1,500	1,364	591	387	359	263	1,084
1959	544	332	480	689	1,524	2,184	2,470	602	468	1,106	1,049	679	1,007
1960	1,419	1,177	1,356	1,780	2,349	1,862	1,263	605	253	552	1,731	1,276	1,300

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	0.12	0.31	0.64	0.73	1.32	2.60	1.07	0.98	0.27	0.15	0.66	0.33	9.18
1953	.17	.43	.53	.98	1.29	1.79	.63	.92	.72	.13	.12	.12	7.83
1954	.11	.20	.75	1.66	1.02	1.20	1.82	.46	.19	.15	.04	.02	7.62
1955	.05	.13	.42	.70	.92	.91	.74	.24	.19	.84	3.66	5.45	14.25
1956	1.19	.77	.77	.78	1.76	1.70	1.26	1.66	.49	.85	.70	.47	12.40
1957	.92	.72	.74	.74	.85	2.51	1.04	.65	1.93	.18	.13	.38	10.77
1958	.76	1.43	3.55	3.51	2.19	2.76	2.46	2.31	.97	.66	.61	.43	21.64
1959	.92	.54	.81	1.17	2.33	3.70	4.06	1.02	.77	1.87	1.78	1.11	20.07
1960	2.41	1.93	2.30	3.02	3.73	3.16	2.07	1.03	.42	.94	2.94	2.09	26.04

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	1233	a2,090	Mar. 8, 1952	43	459	0.675	9.18	462	9.24
1953	1272	a1,510	Mar. 16, 1953	25	392	.576	7.83	389	7.76
1954	1333	a1,860	Apr. 12, 1954	8.9	382	.562	7.62	359	7.16
1955	1383	*a7,150	Sept. 9, 1955	8.9	713	1.05	14.25	820	16.38
1956	1433	2,810	May 12, 1956	104	620	.912	12.40	602	12.05
1957	1503	a3,640	June 13, 1957	32	540	.794	10.77	708	14.13
1958	1553	2,870	Dec. 1-2, 1958	78	1,084	1.59	21.64	910	18.17
1959	1623	5,420	Mar. 9, 1959	116	1,007	1.48	20.07	1,225	24.44
1960	1703	7,510	Aug. 2, 1960	122	1,300	1.91	26.04	-	-

* Revised.
a Maximum observed.

1070. South River near Parkersburg, N. C.

Location.--Lat 34°48'45", long 78°27'26", on downstream side of highway bridge near center of span, at Bladen-Sampson County line, 1.9 miles southwest of Parkersburg, Sampson County.

Drainage area.--382 sq mi.

Records available.--October 1951 to September 1960.

Gage.--Wire-weight gage. Datum of gage is 0.38 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--9 years (1951-60), 412 cfs (revised).

Extremes.--1951-60: Maximum discharge, 5,000 cfs Aug. 24, 1955 (gage height, 64.20 ft); minimum, 0.1 cfs Oct. 3-6, 11-14, 1954.

Flood in 1918 or 1928 reached a stage of 65.88 ft, from high-water mark witnessed by local resident.

Remarks.--Records of chemical analyses for the period October 1954 to September 1955 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	19.9	56.6	132	189	454	1,048	385	207	44.5	16.8	120	281	246
1953	43.8	151	292	395	500	715	287	368	46.3	54.8	8.52	8.51	238
1954	10.9	29.2	156	678	558	475	702	196	116	26.3	18.6	1.21	245
1955	9.78	33.9	187	302	510	356	326	111	31.2	236	1,291	1,748	427
1956	387	232	251	210	652	664	478	357	123	301	195	205	337
1957	305	507	329	319	377	1,029	476	172	484	33.7	13.4	29.7	339
1958	151	383	1,149	1,104	877	891	985	905	248	164	66.0	48.2	581
1959	194	152	174	545	1,036	1,052	1,304	352	383	685	668	571	589
1960	702	732	688	964	1,484	1,041	853	220	68.9	142	865	*751	*706

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	0.06	0.17	0.40	0.57	1.28	3.16	1.12	0.62	0.13	0.05	0.36	0.82	8.74
1953	.13	.44	.88	1.19	1.36	2.16	.84	1.11	.14	.17	.03	.02	8.47
1954	.03	.09	.47	2.05	1.52	1.43	2.05	.59	.34	.08	.06	.004	8.71
1955	.03	.10	.57	.91	1.39	1.07	.95	.33	.09	.71	3.90	5.10	15.15
1956	1.17	.68	.76	.63	1.84	2.00	1.40	1.08	.36	.91	.59	.60	12.02
1957	.92	1.48	.99	.96	1.03	3.11	1.39	.52	1.41	.10	.04	.09	12.04
1958	.45	1.15	3.47	3.33	2.39	2.69	2.88	2.73	.73	.50	.20	.14	20.66
1959	.59	.44	.53	1.65	2.83	3.17	3.81	1.06	1.12	2.07	2.02	1.67	20.96
1960	2.12	2.14	2.08	2.91	4.19	3.14	2.49	.67	.20	.43	2.61	*2.19	*25.17

* Revised.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	1233	1,480	Mar. 8, 1952	5.4	246	0.644	8.74	269	9.58
1953	1275	880	Mar. 17-18	1.8	238	.625	8.47	214	7.61
1954	1335	1,730	Jan. 31, 1954	.2	245	.641	9.71	246	8.32
1955	1383	5,000	Aug. 24, 1955	.1	427	1.12	15.15	480	17.06
1956	1435	914	Feb. 24, 1956	49	337	.882	12.02	359	12.80
1957	1503	1,560	Mar. 6, 1957	5.4	339	.887	12.04	386	13.72
1958	1553	1,970	May 10, 1958	15	581	1.52	20.66	482	17.15
1959	1623	2,040	(a)	22	589	1.54	20.96	724	25.74
1960	1703	2,200	Aug. 1, 1960	18	*706	*1.85	*25.17	-	-

* Revised.

a Mar. 9, 10, Apr. 19, 20, 1959.

1075. Colly Creek near Kelly, N. C.

Location (revised).--Lat 34°27'48", long 78°15'26" (revised), on right bank 10 ft downstream from bridge on State Highway 53, 4 miles east of Kelly, Bladen County, and 6½ miles upstream from mouth.

Drainage area.--103 sq mi (revised).

Records available.--January 1950 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 15.27 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (Corps of Engineers bench mark). Prior to Dec. 13, 1950, staff gage at same site and datum.

Average discharge.--10 years (1950-60), 100 cfs.

Extremes.--1950-60: Maximum discharge, 910 cfs Sept. 22, 1955 (gage height, 7.20 ft); no flow at times during several years.

Flood in 1908 reached a stage of 11.1 ft; September 1945, 10.2 ft, from information by local resident. Flood in 1928 reached a stage of 7.7 ft, from information by North Carolina State Highway Commission.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	180	93.3	98.8	104	55.8	84.8	151	76.3	2.87	6.66	48.2	23.9	77.4
1952	1.63	6.53	30.0	47.7	105	199	104	18.3	3.58	3.18	4.06	52.4	47.7
1953	46.8	26.3	76.3	107	195	280	84.8	69.9	2.79	1.32	.35	.28	73.8
1954	.337	1.01	57.1	141	104	124	206	34.0	3.98	2.21	.037	0	55.7
1955	.085	.89	4.54	17.2	56.7	66.5	66.8	33.7	10.9	7.84	139	697	90.9
1956	204	87.4	127	76.0	185	174	120	127	48.4	21.9	25.2	28.4	102
1957	78.7	77.5	46.0	56.6	95.1	230	134	23.5	82.3	11.9	1.54	7.57	70.1
1958	11.6	26.7	162	291	239	245	268	149	69.6	95.7	11.4	19.5	132
1959	195	145	76.9	140	269	423	286	119	14.3	171	115	106	171
1960	233	235	179	257	296	301	197	66.9	5.23	17.5	193	196	181

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.01	1.01	1.11	1.16	0.56	0.95	1.64	0.85	0.03	0.07	0.54	0.26	10.19
1952	.02	.07	.34	.53	1.10	2.22	1.13	.20	.04	.04	.05	.57	6.31
1953	.52	.29	.85	1.20	1.98	3.13	.92	.78	.03	.01	.004	.003	9.72
1954	.004	.01	.64	1.57	1.05	1.39	2.23	.38	.04	.02	.0004	0	7.54
1955	.001	.01	.05	.19	.57	.74	.72	.38	.12	.09	1.56	7.55	11.98
1956	2.29	.95	1.42	.85	1.94	1.94	1.30	1.42	.52	.24	.28	.31	13.46
1957	.88	.84	.51	.63	.96	2.57	1.45	.26	.89	.13	.02	.08	9.22
1958	.13	.29	1.81	3.26	2.42	2.75	2.90	1.66	.75	1.07	.15	.21	17.38
1959	2.19	1.57	.86	1.57	2.72	4.73	3.10	1.33	.15	1.91	1.29	1.15	22.57
1960	2.61	2.54	2.00	2.88	3.10	3.37	2.13	.75	.06	.20	2.15	2.13	23.92

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	120	-	15.78
1951	-	-	-	-	-	-	-	-	-	-
1951	1203	a447	Oct. 25-29, 1950	1.0	77.4	0.751	10.19	49.3	6.49	
1952	1233	254	Mar. 7, 1952	0	47.7	.463	6.31	57.1	7.54	
1953	1273	344	Mar. 14, 1953	0	73.8	.716	9.72	66.1	8.71	
1954	1333	303	Apr. 12, 1954	0	55.7	.541	7.34	51.2	6.74	
1955	1383	910	Sept. 22, 1955	0	90.9	.883	11.98	126	16.58	
1956	1433	b236	Mar. 19, 1956	1.2	102	.990	13.46	83.6	11.03	
1957	1503	287	Mar. 14-16, 1957	.4	70.1	.681	9.22	70.1	9.22	
1958	1553	363	Apr. 6, 1958	.6	132	1.28	17.38	150	19.77	
1959	1623	850	Mar. 11-12, 1959	.8	171	1.66	22.57	191	25.10	
1960	1703	508	Oct. 25, 1959	.4	181	1.76	23.92	-	-	

a Maximum observed.

b Maximum peak discharge; maximum discharge during year, 528 cfs at 12:01 a.m. Oct. 1, 1955, stage falling.

1076. Northeast Cape Fear River near Seven Springs, N. C.

Location.--Lat 35°10'20", long 77°55'56", on left bank at downstream side of bridge on county highway and at Wayne-Duplin County line, 4½ miles upstream from Buck Marsh Branch and 6 miles southwest of Seven Springs, Wayne County.

Drainage area.--47.5 sq mi.

Records available.--July 1958 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 89.93 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--1958-60: Maximum discharge, 1,810 cfs July 30, 1960; maximum gage height, 9.17 ft Sept. 12, 1960; minimum discharge, 6.0 cfs June 29, 30, 1959.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	-	-	-	-	35.1	10.8	-
1959	44.9	29.6	40.1	42.7	99.7	158	147	23.8	40.3	102	50.7	37.2	67.7
1960	65.7	83.2	94.0	121	226	104	80	49.9	31.7	109	88.2	127	97.8

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	-	-	-	-	0.85	0.25	-
1959	1.09	0.70	0.97	1.04	2.19	3.83	3.46	0.58	0.95	2.47	1.23	.87	19.38
1960	1.59	1.96	2.28	2.93	5.12	2.53	1.88	1.21	.74	2.66	2.14	2.98	28.02

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1958	1623	-	-	5.3	-	-	-	-	-
1959	1623	1,160	Mar. 7, 1959	6.2	67.7	1.43	19.38	78.5	22.45
1960	1703	1,810	July 30, 1960	8.5	97.8	2.06	28.02	-	-

1080. Northeast Cape Fear River near Chinquapin, N. C.

Location.--Lat 34°49'40" (revised), long 77°50'00", on right bank 540 ft downstream from bridge on State Highway 41, half a mile downstream from Muddy Creek, and $1\frac{1}{4}$ miles west of Chinquapin, Duplin County.

Drainage area.--600 sq mi.

Records available.--July 1940 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 17.28 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--20 years (1940-60), 664 cfs.

Extremes.--1940-60: Maximum discharge, 15,200 cfs Sept. 22, 1955 (gage height, 17.97 ft); minimum, 6.3 cfs Oct. 10, 11, 1954.

Flood in 1908 reached a stage of 22.6 ft at old bridge site 1,000 ft upstream from gage. Flood in 1928 reached a stage of 0.8 ft lower than that of 1908, from information by North Carolina State Highway Commission.

Remarks.--Records of chemical analyses and water temperatures for the periods October 1950 to September 1951, October 1956 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	585	174	331	411	324	446	493	171	25.4	144	189	46.1	279
1952	43.2	411	476	465	1,003	1,532	417	484	109	93.7	211	169	500
1953	61.7	162	245	452	1,164	1,110	238	231	599	61.0	44.5	224	377
1954	194	242	930	1,270	512	577	958	139	69.1	25.9	33.8	11.0	412
1955	7.59	15.6	59.6	158	249	261	184	123	98.5	369	2,681	4,754	745
1956	473	370	434	494	1,182	870	621	1,096	264	187	103	117	516
1957	351	515	299	341	466	1,440	441	193	731	114	50.6	322	438
1958	528	770	2,018	1,854	1,016	1,421	1,135	1,158	410	315	245	262	930
1959	800	363	608	836	1,372	2,743	1,896	333	226	1,127	643	534	956
1960	997	1,061	1,300	1,602	2,154	1,531	1,088	538	235	680	1,961	1,509	1,219

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.12	0.32	0.64	0.79	0.56	0.86	0.92	0.33	0.05	0.28	0.36	0.09	6.32
1952	.08	.76	.91	.89	1.80	2.94	.77	.93	.20	.18	.40	.31	10.17
1953	.12	.30	.47	.87	2.02	2.13	.44	.44	1.11	.12	.09	.42	8.53
1954	.37	.45	1.79	2.44	.89	1.11	1.78	.27	.13	.05	.03	.02	9.33
1955	.01	.03	.11	.30	.43	.50	.34	.24	.18	.71	5.15	8.84	16.84
1956	.91	.69	.83	.95	2.13	1.67	1.16	2.11	.49	.36	.20	.22	11.72
1957	.68	.96	.58	.66	.81	2.77	.82	.37	1.36	.22	.10	.60	9.95
1958	1.01	1.43	3.88	3.56	1.76	2.73	2.11	2.22	.76	.61	.47	.49	21.05
1959	1.54	.67	1.17	1.61	2.38	5.27	3.53	.64	.42	2.17	1.24	.99	21.63
1960	1.92	1.97	2.50	3.08	3.87	2.94	2.02	1.03	.44	1.31	3.77	2.81	27.66

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	576	13.01
1951	1203	3,080	Oct. 22, 1950	12	279	0.465	6.32	†265	5.99
1952	1233	2,530	Mar. 1, 1952	22	300	.833	10.17	412	9.31
1953	1273	2,020	June 19, 1953	13	377	.828	8.53	455	10.25
1954	1333	2,210	Apr. 12, 1954	6.9	412	.687	9.33	304	6.87
1955	1383	15,200	Sept. 22, 1955	5.3	745	1.24	16.84	846	19.12
1956	1433	3,850	May 10, 1956	25	516	.860	11.72	506	11.51
1957	1503	2,710	June 11, 1957	16	438	.730	9.95	620	14.03
1958	1553	3,380	May 9-10, 1958	50	950	1.55	21.03	800	18.09
1959	1623	10,300	Mar. 8, 1959	43	950	†1.59	21.63	1,089	24.64
1960	1703	10,200	Aug. 1, 1960	63	1,219	2.03	27.66	-	-

† Corrected.

1085. Rockfish Creek near Wallace, N. C.

Location.--Lat 34°44'32", long 78°02'22", on downstream side of bridge on State Highway 41, 1½ miles upstream from Doctors Creek and 2½ miles west of Wallace, Duplin County.

Drainage area.--63.8 sq mi. At site used July 1955 to September 1958, 65.2 sq mi.

Records available.--July 1955 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 29.36 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 1, 1958, wire-weight or staff gage at site 1.0 mile downstream at different datum. Oct. 1, 1958, to June 1, 1960, wire-weight gage at present site and datum.

Average discharge.--5 years (1955-60), 93.9 cfs.

Extremes.--1955-60: Maximum discharge, 2,800 cfs Sept. 20, 1955 (gage height, 15.5 ft, from graph based on gage readings, site and datum then in use); minimum daily, 0.4 cfs July 27-30, 1955.

Flood in 1948 reached about the same stage as that of Sept. 20, 1955. These two floods were the highest in 20 years (from information by local resident).

A discharge of 0.04 cfs was measured on Sept. 8, 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	126	408	-
1956	54.3	38.2	44.1	47.6	142	80.2	49.9	150	52.6	32.0	52.7	10.8	62.7
1957	48.6	30.9	24.0	29.3	42.8	209	36.4	11.6	65.5	2.63	14.7	71.1	48.9
1958	56.7	109	236	205	97.1	145	127	94.9	70.5	28.9	22.2	25.4	102
1959	140	36.2	77.2	65.4	177	331	175	34.4	36.0	175	90.1	101	120
1960	194	130	159	170	295	163	122	53.1	30.5	97.1	82.6	147	136

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	2.23	6.99	-
1956	0.96	0.65	0.78	0.84	2.35	1.42	0.85	2.66	0.90	0.57	.93	.18	13.09
1957	.86	.53	.42	.52	.68	3.69	.62	.20	1.12	.05	.26	1.22	10.17
1958	1.00	1.87	4.18	3.63	1.55	2.57	2.17	1.68	1.21	.51	†.39	.40	21.16
1959	2.53	.63	1.39	1.18	2.69	5.99	3.07	.62	.66	3.16	1.63	1.76	25.51
1960	3.51	2.28	2.87	3.07	4.98	2.95	2.13	.96	.53	1.75	1.49	2.58	29.10

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-
1955	1433	2,800	Sept. 20, 1955	-	-	-	-	-	-
1956	1433	920	May 8, 1956	0.9	62.7	0.962	13.09	59.9	12.51
1957	1503	403	June 11, 1957	.5	48.9	.750	10.17	74.0	15.41
1958	1553	685	Apr. 1, 1958	1.1	102	1.56	21.16	89.2	18.66
1959	1623	2,470	Mar. 6, 1959	2.2	120	1.88	25.51	139	29.62
1960	1703	1,490	July 30, 1960	3.4	136	2.13	29.10	-	-

1095. Waccamaw River at Freeland, N. C.

Location.--Lat 34°05'43", long 78°32'56", on left bank 150 ft downstream from New Britton Bridge on State Highway 130, 1 mile southwest of Freeland, Brunswick County, and 7 miles downstream from Juniper Creek.

Drainage area.--706 sq mi (revised).

Records available.--July 1939 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 15.52 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 15, 1943, staff gage at site 150 ft upstream at same datum. Since July 15, 1952, auxiliary water-stage recorder at site 3.3 miles downstream; Oct. 7, 1949, to July 14, 1952, auxiliary staff gage at same site.

Average discharge.--21 years (1939-60), 659 cfs.

Extremes.--1939-60: Maximum discharge, 10,200 cfs Sept. 25, 1955; maximum gage height, 16.63 ft Sept. 26, 1955; minimum discharge, 0.1 cfs Aug. 30, Sept. 9, 10, 28, Oct. 4-14, 1954.

Remarks.--Records of chemical analyses for the periods October 1950 to September 1951, October 1956 to September 1960, and water temperatures for the period October 1950 to September 1951 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	368	526	571	612	296	698	1,029	285	48.8	84.2	150	48.2	377
1952	26.0	30.0	84.9	106	363	1,150	774	77.5	5.51	5.72	20.3	485	259
1953	525	254	441	708	1,664	2,070	485	69.2	7.87	13.7	47.1	9.18	519
1954	5.17	11.6	210	632	440	729	1,513	196	27.9	11.9	7.59	.31	297
1955	1.72	.54	3.53	20.6	247	219	277	138	29.3	43.9	607	4,825	529
1956	1,425	206	316	224	1,072	1,039	567	692	180	243	166	158	524
1957	390	327	146	138	286	1,393	973	97.9	565	265	18.9	22.0	385
1958	173	41.1	370	1,684	1,351	1,432	2,496	981	620	958	315	285	887
1959	708	433	308	862	1,871	3,293	1,194	415	133	521	515	627	902
1960	1,517	1,090	1,182	1,559	2,102	2,435	1,823	300	46.9	547	2,289	1,585	1,372

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.60	0.83	0.61	1.00	0.44	1.14	1.63	0.47	0.08	0.14	0.25	0.08	7.27
1952	.04	.05	.14	.17	.55	1.88	1.22	.13	.009	.009	.03	.77	5.00
1953	.86	.40	.72	1.16	2.45	3.38	.77	.11	.01	.02	.08	.01	9.97
1954	.008	.02	.34	1.03	.65	1.19	2.07	.32	.04	.02	.01	.005	5.70
1955	.003	.0008	.006	.03	.56	.36	.44	.23	.05	.07	.99	7.63	10.17
1956	2.33	.33	.52	.37	1.64	1.70	.90	1.13	.29	.40	.27	.25	10.13
1957	.64	.52	.24	.23	.42	2.28	1.54	.16	.89	.43	.03	.03	7.41
1958	.28	.06	.60	2.75	1.99	2.34	3.94	1.60	.98	1.53	.51	.45	17.03
1959	1.16	.68	.50	1.41	2.76	5.38	1.89	.68	.21	.85	.84	.99	17.35
1960	2.48	1.72	1.95	2.55	3.21	3.98	2.88	.49	.07	.89	3.74	2.51	26.45

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	481	9.26
1951	1203	1,280	Apr. 12, 1951	15	377	0.534	7.27	282	5.46
1952	1233	1,670	Apr. 3, 1952	2.7	259	.367	5.00	350	6.75
1953	1273	2,450	Mar. 15-16, 1953	.9	519	.735	9.97	435	8.56
1954	1333	1,780	Apr. 10-13, 1954	.1	297	.421	5.70	278	5.34
1955	1383	10,200	Sept. 25, 1955	.1	529	.749	10.17	693	13.34
1956	1433	11,780	Feb. 16, 1956	34	524	.742	10.13	432	8.35
1957	1503	2,060	Mar. 17, 1957	4.8	385	.545	7.41	362	6.95
1958	1553	3,170	Apr. 20-21	21	887	1.26	17.03	959	18.43
1959	1623	8,390	Mar. 10-11, 1959	17	902	1.28	17.35	1,099	21.14
1960	1703	6,950	Aug. 2, 1960	17	1,372	1.94	26.45	-	-

a Maximum peak discharge; maximum discharge during the year, 4,900 cfs at 12:01 a.m. Oct. 1, 1955, stage falling.

1105. Waccamaw River near Longs, S. C.

Location.--Lat 33°54'45", long 78°42'55", near right bank on upstream side of bridge on State Highway 9, 500 ft downstream from Buck Creek and 2.1 miles southeast of Longs, Horry County.

Drainage area.--1,110 sq mi (revised), approximately.

Records available.--March 1950 to September 1960.

Gage.--Wire-weight and crest-stage gages. Datum of gage is 5.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers).

Average discharge.--10 years (1950-60), 1,067 cfs.

Extremes.--1950-60: Maximum discharge, 10,300 cfs Sept. 28-30, 1955; maximum gage height, 13.82 ft Sept. 29, 1955; minimum discharge, 1 cfs Oct. 14, 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	357	796	504	1,192	530	1,154	1,625	555	155	138	497	80.2	632
1952	51.8	45.9	141	199	669	1,894	1,407	120	18.3	13.2	54.5	686	439
1953	941	440	910	1,268	2,799	4,255	940	99.5	26.7	25.6	177	29.8	985
1954	27.9	39.9	775	1,296	856	1,319	2,054	458	84.3	18.3	14.5	3.7	577
1955	47.5	11.3	30.1	159	529	363	507	260	78.6	118	1,319	6,767	841
1956	3,245	297	476	316	1,491	1,733	955	1,278	262	310	161	190	895
1957	336	579	157	136	338	2,540	1,778	151	831	432	38.6	101	618
1958	735	77.9	1,022	3,164	2,476	2,617	5,072	1,808	1,014	1,581	609	590	1,725
1959	1,481	858	539	1,618	3,078	5,523	1,658	921	308	1,165	711	744	1,545
1960	2,635	2,093	1,792	2,555	3,136	4,420	3,386	500	94.7	728	4,524	3,163	2,418

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.37	0.80	0.52	1.23	0.50	1.20	1.63	0.58	0.16	0.14	0.52	0.08	7.73
1952	.05	.05	.15	.21	.65	1.97	1.42	.12	.02	.01	.06	.69	5.40
1953	.98	.44	.95	1.31	2.62	4.42	.94	.10	.03	.03	.18	.03	12.03
1954	.03	.04	.80	1.35	.80	1.37	2.06	.48	.08	.02	.02	.004	7.05
1955	.05	.01	.03	.16	.50	.38	.51	.27	.08	.12	1.37	6.81	10.29
1956	3.37	.30	.49	.33	1.44	1.80	.96	1.33	.26	.32	.17	.19	10.96
1957	.35	.58	.16	.14	.32	2.64	1.78	.16	.84	.45	.04	.10	7.56
1958	.76	.08	1.06	3.29	2.32	2.72	5.10	1.88	1.02	1.64	.63	.59	21.09
1959	1.53	.86	.56	1.68	2.88	5.74	1.66	.96	.51	1.21	.74	.75	18.88
1960	2.73	2.11	1.86	2.65	3.05	4.59	3.40	.52	.09	.76	4.70	3.18	29.64

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1233	1,860	Jan. 9, 1951	47	632	0.569	7.73	514	6.29
1952	1233	2,520	Apr. 1-5, 1952	9	439	.395	5.40	612	7.52
1953	1273	6,360	Mar. 15, 1953	12	985	.887	12.03	863	10.53
1954	1333	2,520	Apr. 9-15, 1954	2	577	.520	7.05	513	6.27
1955	1383	10,300	Sept. 28-30, 1955	1	841	.758	10.29	1,174	14.36
1956	1433	2,230	Feb. 19, 1956	68	895	.806	10.96	645	7.89
1957	1503	3,780	Mar. 15-16, 1957	21	618	.557	7.56	694	8.37
1958	1553	7,540	Apr. 18, 1958	47	1,725	1.55	21.09	1,811	22.14
1959	1623	9,760	Mar. 13, 1959	42	1,545	1.39	18.88	1,851	22.63
1960	1703	10,000	Aug. 4, 1960	42	2,418	2.18	29.64	-	-

a Maximum peak discharge; maximum discharge during year, 9,710 cfs at 12:01 a.m. Oct. 1, 1955, stage falling.

1110. Yadkin River at Patterson, N. C.

Location.--Lat 35°59'29", long 81°33'30", on left bank 200 ft upstream from bridge on State Highway 268, 0.4 mile upstream from Warrior Creek, half a mile south of Patterson, Caldwell County, and 2 miles downstream from Walnut Branch.

Drainage area.--29.0 sq mi (revised).

Records available.--October 1939 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 1,212.47 ft above mean sea level, unadjusted. Prior to Feb. 9, 1940, staff gage at same site and datum.

Average discharge.--21 years (1939-60), 46.0 cfs.

Extremes.--1939-60: Maximum discharge, 16,200 cfs Aug. 13, 1940 (gage height, 12.70 ft), from rating curve extended above 1,300 cfs on basis of computation of peak flow over dam 1 mile upstream at gage heights 4.58, 7.70, and 12.70 ft; minimum observed, 3.0 cfs May 15, 1940.

Remarks.--Prior to 1948 some diurnal fluctuation during low flow caused by mill above station. Occasional regulation for short periods since Feb. 25, 1958, by detention dam 1 mile upstream.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	31.5	29.9	70.5	35.3	61.1	72.7	84.6	35.2	44.2	27.9	21.2	14.8	43.9
1952	13.1	20.9	43.7	33.4	61.3	121	58.0	41.0	27.0	17.2	20.9	15.1	39.3
1953	11.9	17.8	19.4	41.2	78.7	100	40.8	31.8	31.1	22.5	13.5	16.8	35.2
1954	11.7	12.9	27.1	49.1	52.0	50.1	41.0	43.6	20.4	11.8	11.7	6.95	28.1
1955	8.46	12.4	26.6	18.4	37.4	42.7	61.7	26.2	17.8	36.1	21.2	12.3	26.8
1956	12.0	13.1	11.8	11.4	35.9	37.4	55.9	27.4	13.0	20.5	9.27	11.9	21.5
1957	23.1	30.0	37.5	35.3	65.8	48.6	135	35.5	85.1	31.9	18.0	45.2	48.9
1958	44.9	87.9	73.7	65.7	66.4	73.6	107	96.2	64.6	47.0	44.5	25.6	66.4
1959	22.5	21.0	43.9	43.8	37.7	44.9	73.6	39.3	55.6	33.1	29.2	74.4	43.2
1960	89.6	47.2	66.6	74.4	143	106	106	61.4	55.6	49.9	68.4	45.2	75.9

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.25	1.15	2.80	1.40	2.20	2.89	3.25	1.40	1.70	1.11	0.84	0.57	20.56
1952	.52	.81	1.74	1.33	2.28	4.80	2.23	1.63	1.04	.68	.83	.58	18.47
1953	.47	.68	1.77	1.64	2.83	3.96	1.57	1.26	1.20	.89	.54	.64	16.45
1954	.47	.50	1.08	1.95	1.87	1.99	1.58	1.73	.78	.47	.46	.27	13.15
1955	.34	.48	1.06	.73	1.34	1.70	2.37	1.04	.68	1.51	.84	.47	12.56
1956	.48	.51	.47	.45	1.34	1.49	2.15	1.09	.50	.81	.37	.46	10.12
1957	.92	1.16	1.49	1.40	2.36	1.93	5.20	1.41	3.28	1.27	.72	1.74	22.88
1958	1.79	3.38	2.93	2.61	2.38	2.93	4.12	3.82	2.49	1.87	1.77	.99	31.08
1959	.90	.81	1.75	1.74	1.35	1.79	2.83	1.56	2.14	1.32	1.16	2.86	20.21
1960	3.56	1.82	2.65	2.96	5.30	4.23	4.08	2.44	2.14	1.99	2.72	1.74	35.63

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	1172	-	-	-	-	-	-	-	-
1951	1203	*1,940	Dec. 7, 1950	12	43.9	1.51	20.56	49.9	23.35
1952	1233	4,930	Mar. 11, 1952	11	39.3	1.36	18.47	39.4	18.43
1953	1273	1,380	Feb. 21, 1953	9.7	35.2	1.21	16.45	36.9	17.32
1954	1333	974	Jan. 22, 1954	5.3	28.1	.969	13.15	27.7	12.98
1955	1383	734	Apr. 14, 1955	6.0	26.8	.924	12.56	25.9	12.14
1956	1433	538	Apr. 16, 1956	5.3	21.5	.741	10.12	26.0	12.23
1957	1503	3,130	Apr. 5, 1957	11	48.9	1.69	22.88	58.6	27.41
1958	1553	571	Nov. 19, 1957	21	66.4	2.29	31.08	56.5	26.44
1959	1623	1,910	Sept. 30, 1959	14	43.2	1.49	20.21	52.9	24.78
1960	1703	1,120	July 27, 1960	29	75.9	2.62	35.63	-	-

* Revised.

1115. Reddies River at North Wilkesboro, N. C.

Location.--Lat 36°10', long 81°10', on left bank 400 ft upstream from highway bridge, 1 1/4 miles northwest of North Wilkesboro, Wilkes County, 1 1/4 miles upstream from North Wilkesboro municipal dam, and 2 miles upstream from mouth.

Drainage area.--93.9 sq mi.

Records available.--October 1939 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 978.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--21 years (1939-60), 136 cfs.

Extremes.--1939-60: Maximum discharge, 27,000 cfs Aug. 14, 1940 (gage height, 22.02 ft), from rating curve extended above 2,100 cfs on basis of computation of peak flow over dam; minimum, 22 cfs Aug. 17, 1954.

Remarks.--Slight diurnal fluctuation at low flow during growing season. Records of chemical analyses for the period October 1953 to September 1955 and water temperatures for the period October 1954 to September 1955 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	121	120	218	125	167	186	254	144	146	117	81.5	67.8	145
1952	59.0	80.5	140	102	167	305	180	134	102	79.2	95.5	68.1	126
1953	58.8	97.9	94.1	129	191	263	152	132	106	70.5	57.5	56.2	117
1954	48.3	55.9	83.2	128	138	138	109	102	58.6	43.6	57.4	30.8	82.5
1955	34.5	57.4	93.2	68.5	113	127	185	90.8	71.0	109	100	59.7	92.2
1956	59.7	54.0	49.5	44.5	113	101	139	71.3	47.6	55.4	31.0	46.9	67.5
1957	81.3	81.8	92.7	92.9	172	151	350	135	176	101	73.6	185	140
1958	151	230	215	209	201	220	255	257	156	122	115	74.9	184
1959	78.0	70.9	125	116	93.1	113	180	105	110	78.2	70.3	181	110
1960	178	122	154	160	386	283	355	220	161	126	135	113	199

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.49	1.42	2.67	1.54	1.85	2.28	3.01	1.77	1.73	1.44	1.00	0.81	21.01
1952	.72	.96	1.71	1.25	1.92	3.74	2.14	1.64	1.22	.97	1.17	.81	†18.25
1953	.72	1.16	1.16	1.58	2.12	3.23	1.81	1.62	1.26	.87	.71	.67	16.91
1954	.59	.66	1.02	1.58	1.53	1.70	1.30	1.25	.70	.54	.70	.37	11.94
1955	.42	.68	1.14	.84	1.25	1.56	2.19	1.11	.84	1.34	1.23	.71	13.31
1956	.73	.64	.61	.55	1.30	1.24	1.65	.88	.57	.68	.38	.56	9.79
1957	1.00	.97	1.14	1.14	1.90	1.85	4.16	1.86	2.10	1.24	.90	2.19	20.25
1958	1.86	2.73	2.64	2.56	2.23	2.70	3.03	3.15	1.86	1.50	1.41	.89	26.56
1959	.96	1.84	1.53	1.43	1.03	1.39	2.14	1.29	1.31	.96	.86	2.15	15.89
1960	2.19	1.45	1.89	1.96	4.43	3.48	4.22	2.71	1.91	1.54	1.66	1.35	28.79

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	156	22.57
1951	1203	4,690	Dec. 7, 1950	60	145	1.54	21.01	130	18.82
1952	1233	7,400	Mar. 11, 1952	52	126	1.34	†18.25	124	17.90
1953	1273	2,500	Feb. 21, 1953	37	117	1.25	16.91	112	16.14
1954	1333	2,440	Feb. 21, 1954	23	82.5	.879	11.94	82.3	11.91
1955	1383	3,270	Apr. 14, 1955	26	92.2	.982	13.31	90.3	13.05
1956	1433	2,150	Apr. 16, 1956	23	67.5	.719	9.79	75.5	10.92
1957	1503	4,290	Apr. 5, 1957	35	140	1.49	20.25	169	24.37
1958	1553	1,730	Mar. 31, 1958	64	184	1.96	26.56	157	22.66
1959	1623	4,040	Sept. 30, 1959	36	110	1.18	15.89	125	18.09
1960	1703	3,000	Feb. 5, 1960	88	199	2.12	28.79	-	-

† Corrected.

1120. Yadkin River at Wilkesboro, N. C.

Location.--Lat 36°09', long 81°09', on right bank 150 ft upstream from bridge on U.S. Highway 421 between North Wilkesboro and Wilkesboro, 150 ft downstream from Reddies River, and half a mile northeast of Wilkesboro, Wilkes County.

Drainage area.--493 sq mi.

Records available.--April 1903 to June 1909, October 1920 to September 1960. Prior to October 1928, published as "at North Wilkesboro."

Gage.--Water-stage recorder. Datum of gage is 942.35 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Apr. 10, 1903, to June 30, 1909, and Oct. 17, 1920, to Apr. 10, 1929, staff or chain gages at site 1½ miles downstream at different datums. Apr. 11, 1929, to Jan. 9, 1930, chain gage at present site and datum. Datum used 1920-29 was about 1.2 ft lower than that used 1903-9.

Average discharge.--45 years (1903-8, 1920-60), 801 cfs.

Extremes.--1903-9, 1920-60: Maximum discharge, 160,000 cfs Aug. 14, 1940 (gage height, 37.6 ft, from floodmarks), from rating curve extended above 20,000 cfs on basis of slope-area measurement of peak flow; minimum, 99 cfs Sept. 28-30, 1954; minimum daily, 110 cfs Sept. 18, 19, 1956.

Flood in July 1916 reached a stage of 34.5 ft (present site and datum), from flood-mark (discharge, 116,000 cfs, from rating curve extended above 20,000 cfs as explained above).

Remarks.--Prior to May 1955 slight diurnal fluctuation at low flow caused by powerplants on Reddies River 1 mile above station. Records of water temperatures for the period October 1957 to April 1960 are published in reports of the Geological Survey.

Correction.--In WSP 1303, some figures in the water year 1925 are listed in error; the correct figures are given herewith:

Month	Mean	Per square mile	Runoff in inches
December 1924.....	865	1.69	22.95
Calendar year 1924.....	1,110	2.16	2.49
May 1925.....	590	1.15	1.33
Water year 1924-25.....	631	1.23	16.71
Calendar year 1925.....	499	.973	13.21

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	620	592	1,148	628	960	1,036	1,504	700	803	589	448	334	762
1952	293	416	780	579	919	1,678	1,020	712	515	368	476	350	675
1953	278	413	416	698	1,204	1,426	687	577	532	357	276	290	592
1954	241	260	468	843	802	794	608	623	373	236	262	136	469
1955	164	292	465	333	619	704	992	459	349	541	346	213	457
1956	230	230	212	198	554	551	827	429	232	297	159	234	345
1957	390	420	513	472	969	786	1,739	804	1,247	558	391	1,147	781
1958	847	1,291	1,183	1,126	1,098	1,192	1,574	1,420	917	695	620	411	1,030
1959	429	402	748	690	551	640	1,021	624	677	451	446	1,057	644
1960	1,194	737	935	1,005	2,303	1,687	1,697	1,246	893	714	890	808	1,188

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.45	1.34	2.69	1.47	2.03	2.42	2.95	1.64	1.82	1.38	1.05	0.76	21.00
1952	.69	.94	1.82	1.35	2.01	3.92	2.31	1.66	1.17	.86	1.11	.79	18.63
1953	.65	.93	.97	1.63	2.54	3.33	1.56	1.35	1.20	.84	.64	.66	16.30
1954	.56	.59	1.10	1.97	1.69	1.86	1.38	1.46	.84	.55	.61	.31	12.92
1955	.38	.66	1.13	.78	1.31	1.65	2.24	1.07	.79	1.27	.81	.48	12.57
1956	.54	.52	.50	.46	1.21	1.29	1.87	1.00	.52	.70	.37	.53	9.51
1957	.91	.95	1.20	1.10	2.05	1.84	3.94	1.88	2.82	1.30	.91	2.59	21.49
1958	1.98	2.92	2.77	2.63	2.32	2.79	3.56	3.32	2.07	1.62	1.45	.93	28.36
1959	1.00	.91	1.75	1.61	1.16	1.50	2.31	1.46	1.53	1.06	1.04	2.39	17.73
1960	2.79	1.67	2.19	2.35	5.04	3.94	4.29	2.91	2.02	1.67	2.08	1.83	32.78

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	836	23.01
1951	1203	12,300	Dec. 7, 1950	284	762	1.55	21.00	698	18.97
1952	1233	12,800	Mar. 11, 1952	242	675	1.37	18.63	643	17.73
1953	1273	11,300	Feb. 21, 1953	180	592	1.20	16.30	581	16.00
1954	1333	11,600	Jan. 22, 1954	113	469	.951	12.92	467	12.84
1955	1383	10,200	Apr. 14, 1955	114	457	.927	12.57	434	11.96
1956	1433	7,650	Apr. 16, 1956	110	345	.700	9.51	399	11.01
1957	1503	15,500	Apr. 5, 1957	186	781	1.58	21.49	948	26.10
1958	1553	6,640	Mar. 31, 1958	329	1,030	2.09	28.56	885	24.35
1959	1623	15,200	Sept. 30, 1959	293	644	1.31	17.73	752	20.71
1960	1703	all, 600	Feb. 5, 1960	546	1,168	2.41	32.78	-	-

a Maximum peak discharge; maximum discharge during year, 14,100 cfs at 12:01 a.m. Oct. 1, 1959, stage falling.

1130. Fisher River near Copeland, N. C.

Location.--Lat 36°20', long 80°40', on left bank 500 ft upstream from bridge on State Highway 268, 1 mile upstream from Cody Creek, and 2 miles northwest of Copeland, Surry County.

Drainage area.--121 sq mi.

Records available.--October 1931 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 913 ft (by barometer). Prior to Sept. 5, 1936, staff gage at same site and datum.

Average discharge.--29 years (1931-60), 179 cfs.

Extremes.--1931-60: Maximum discharge, 27,300 cfs Aug. 14, 1940 (gage height, 18.4 ft, from floodmarks), from rating curve extended above 5,800 cfs on basis of slope-area measurement of peak flow; minimum, 14 cfs Aug. 28, 1956.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	127	122	247	130	219	200	297	161	157	125	112	77.8	164
1952	64.1	122	258	159	234	387	259	209	166	107	245	122	195
1953	85.2	134	142	178	291	450	211	164	131	141	63.0	55.7	170
1954	51.2	62.3	118	195	171	231	138	135	117	71.6	50.6	27.9	114
1955	61.2	87.0	125	95.4	164	183	263	124	140	107	85.3	49.9	123
1956	49.4	57.6	58.1	54.4	127	126	175	78.7	47.5	85.5	32.3	166	87.6
1957	112	113	130	125	233	200	402	142	211	107	80.9	332	181
1958	188	305	247	278	244	277	376	336	201	152	244	105	246
1959	102	94.5	210	163	122	156	255	174	106	91.9	134	253	155
1960	292	157	219	221	539	354	392	248	174	132	158	130	250

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.21	1.12	2.35	1.24	1.88	1.91	2.74	1.53	1.45	1.19	1.07	0.72	18.41
1952	.61	1.13	2.46	1.52	2.09	3.69	2.39	1.99	1.53	1.02	2.34	1.13	21.90
1953	.81	1.23	1.55	1.70	2.50	4.29	1.94	1.56	1.21	1.34	.60	.51	19.04
1954	.49	.57	1.12	1.65	1.47	2.20	1.27	1.28	1.08	.68	.48	.26	12.75
1955	.58	.80	1.19	.91	1.41	1.74	2.42	1.18	1.29	1.02	.81	.46	13.81
1956	.47	.53	.55	.52	1.14	1.20	1.62	.75	.44	.80	.31	1.53	9.86
1957	1.07	1.04	1.24	1.19	2.01	1.90	3.71	1.35	1.95	1.02	.77	3.07	20.32
1958	1.80	2.81	2.35	2.65	2.10	2.64	3.47	3.20	1.85	1.45	2.33	.97	27.62
1959	.97	.87	2.00	1.55	1.05	1.48	2.35	1.66	.97	.88	1.28	2.34	17.40
1960	2.78	1.45	2.09	2.11	4.80	3.38	3.62	2.37	1.61	1.26	1.50	1.20	28.17

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	193	21.60
1951	1203	3,980	Dec. 7, 1950	61	164	1.36	18.41	160	17.93
1952	1233	3,100	Mar. 11, 1952	54	195	1.61	21.90	187	21.09
1953	1273	6,120	Mar. 24, 1953	37	170	1.40	19.04	159	17.83
1954	1333	3,800	Feb. 21, 1954	17	114	.942	12.75	117	13.14
1955	1383	3,350	June 11, 1955	24	123	1.02	13.81	114	12.79
1956	1433	4,070	Sept. 27, 1956	15	87.6	.724	9.86	104	11.66
1957	1503	5,000	Sept. 17, 1957	49	181	1.50	20.32	213	23.93
1958	1553	5,200	Aug. 3, 1958	84	246	2.03	27.62	218	24.50
1959	1623	5,000	Sept. 30, 1959	52	155	1.28	17.40	177	19.88
1960	1703	4,230	Feb. 5, 1960	96	250	2.07	28.71	-	-

1155. Forbush Creek near Yadkinville, N. C.

Location.--Lat 36°08', long 80°33', on left bank 900 ft upstream from highway bridge, three-quarters of a mile north of Forbush Church, 2½ miles upstream from Logan Creek, 3½ miles upstream from mouth, and 6 miles east of Yadkinville, Yadkin County.

Drainage area.--21.7 sq mi.

Records available.--April 1940 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 728 ft (by barometer).

Average discharge.--20 years (1940-60), 22.8 cfs.

Extremes.--1940-60: Maximum discharge, 2,450 cfs Sept. 30, 1944 (gage height, 11.02 ft), from rating curve extended above 1,500 cfs on basis of velocity-area study and slope-area measurement of peak flow at gage height 10.38 ft; maximum gage height, 11.08 ft Aug. 3, 1958; minimum daily discharge, 0.6 cfs Aug. 16, 17, Sept. 14-18, 1956.

Remarks.--Slight diurnal fluctuation at low flows during growing season.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	14.3	12.2	24.8	13.7	28.0	21.6	37.9	12.3	19.9	8.93	6.03	4.07	16.9
1952	4.35	8.84	29.1	23.5	26.0	62.5	28.7	31.1	13.6	11.0	28.7	10.6	23.2
1953	7.75	10.8	13.1	30.6	47.4	54.1	19.6	13.3	35.3	11.0	10.9	16.9	22.4
1954	7.26	8.25	24.1	58.8	21.0	39.8	22.3	19.1	12.3	7.57	6.10	2.05	19.1
1955	12.3	13.6	19.7	11.9	29.0	17.0	45.4	12.1	8.02	6.20	5.78	3.73	15.2
1956	7.46	6.86	7.05	7.57	17.6	17.3	31.7	12.1	9.77	3.02	4.16	37.4	13.4
1957	8.37	7.95	15.6	18.2	41.5	21.5	39.0	10.9	50.6	8.32	9.27	30.7	21.6
1958	18.1	58.0	29.8	32.7	29.8	32.2	98.0	32.1	24.7	14.0	38.3	9.29	34.6
1959	12.2	10.6	34.6	25.8	19.4	20.5	30.7	15.7	12.3	8.89	35.4	67.7	24.4
1960	75.6	21.0	38.6	55.2	93.0	73.0	56.5	35.5	24.0	23.8	31.5	16.9	45.3

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.76	0.63	1.32	0.73	1.35	1.15	1.95	0.65	1.02	0.47	0.32	0.21	10.56
1952	.23	.45	1.54	1.25	1.29	3.32	1.48	1.65	.70	.58	1.52	.55	14.56
1953	.41	.56	.69	1.62	2.27	2.87	1.01	.71	1.81	.58	.58	.87	13.98
1954	.39	.42	1.28	3.13	1.01	2.12	1.15	1.01	.63	.40	.32	.11	11.97
1955	.65	.70	1.05	.63	1.39	.90	2.33	.64	.41	.33	.31	.19	9.53
1956	.40	.35	.37	.40	.88	.92	1.63	.64	.50	.16	.22	1.92	8.39
1957	.44	.41	.83	.97	1.99	1.14	2.01	.58	2.60	.44	.49	1.58	13.48
1958	.96	2.98	1.59	1.74	1.43	1.71	5.04	1.70	1.27	.74	2.04	.48	21.68
1959	.65	.54	1.83	1.37	.93	1.09	1.58	.84	.63	.47	1.88	3.48	15.29
1960	4.02	1.08	2.05	2.93	4.62	3.88	2.90	1.88	1.24	1.26	1.67	.87	28.40

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	19.8	12.38
1951	1203	668	Feb. 7, 1951	2.8	16.9	0.779	10.56	16.1	10.07
1952	1233	818	Aug. 21, 1952	2.8	23.2	1.07	14.56	22.3	14.00
1953	1273	1,220	Mar. 23, 1953	4.6	22.4	1.03	15.98	23.1	14.41
1954	1333	1,660	Jan. 22, 1954	1.4	19.1	.880	11.97	19.6	12.26
1955	1383	925	Apr. 15, 1955	1.3	15.2	.700	9.53	13.2	8.25
1956	1433	1,170	Sept. 27, 1956	.6	13.4	.618	8.39	14.3	8.95
1957	1503	2,060	June 22, 1957	3.4	21.6	.995	13.48	27.7	17.33
1958	1553	2,060	Aug. 3, 1958	7.8	34.6	1.59	21.68	30.7	19.17
1959	1623	2,020	Sept. 1, 1959	5.0	24.4	1.12	15.29	31.0	19.42
1960	1703	1,870	Oct. 10, 1959	14	45.3	2.09	28.40	-	-

1165. Yadkin River at Yadkin College, N. C.

Location.--Lat 35°51'24", long 80°23'10", near left bank on downstream end of pier of bridge on U.S. Highway 64, 1½ miles south of Yadkin College, Davidson County, and 6¼ miles downstream from Reedy Creek.

Drainage area.--2,280 sq mi, approximately.

Records available.--July 1928 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 638.65 ft above mean sea level (levels by Corps of Engineers). Prior to July 26, 1957, at site on left bank 80 ft downstream at same datum.

Average discharge.--32 years (1928-60), 2,896 cfs.

Extremes.--1928-60: Maximum discharge, 80,200 cfs Aug. 15, 1940 (gage height, 33.75 ft); minimum observed, 177 cfs Oct. 12, 1954 (gage height, -0.42 ft); minimum daily, 330 cfs Oct. 9, 1954, Sept. 23, 1956.
Maximum stage known, 36.3 ft in July 1916, from floodmarks (discharge, 94,300 cfs).

Remarks.--Diurnal fluctuation during low flow caused by small powerplant with little storage capacity 10 miles upstream from station. Records of chemical analyses and water temperatures for the periods October 1950 to September 1951, October 1955 to September 1960, and suspended-sediment loads for the period January 1951 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,030	1,846	3,541	2,072	3,541	3,185	4,989	2,377	2,553	1,952	1,621	1,060	2,555
1952	903	1,597	3,544	2,676	3,652	7,445	4,095	3,131	2,027	1,428	2,465	1,751	2,896
1953	1,118	1,685	1,763	2,982	4,870	6,227	2,933	2,319	2,587	1,532	1,078	1,125	2,504
1954	800	949	2,064	4,613	2,906	3,654	2,486	2,287	1,477	947	915	494	1,965
1955	1,308	1,526	2,140	1,554	3,037	2,793	4,634	1,956	1,781	1,729	1,384	755	2,040
1956	924	944	910	891	2,341	2,236	3,589	1,596	927	1,047	584	2,510	1,516
1957	1,423	1,462	2,224	1,900	4,428	3,225	6,107	2,257	4,147	1,899	1,367	4,107	2,854
1958	5,440	5,995	4,451	4,354	3,861	4,095	7,634	5,422	5,279	2,530	3,218	1,517	4,163
1959	1,439	1,444	3,190	2,881	2,340	2,540	4,081	2,328	1,909	1,696	2,244	3,825	2,496
1960	7,169	2,763	3,841	3,970	10,107	6,388	7,537	4,688	2,997	2,425	3,031	2,401	4,740

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.03	0.90	1.79	1.05	1.62	1.61	2.44	1.20	1.25	0.99	0.82	0.52	15.22
1952	.46	.78	1.79	1.35	1.73	3.76	2.00	1.58	.99	.72	1.26	.86	17.28
1953	.57	.82	.89	1.51	2.22	3.15	1.44	1.17	1.27	.77	.54	.55	14.90
1954	.40	.46	1.04	2.33	1.33	1.85	1.22	1.16	.72	.48	.46	.24	11.69
1955	.66	.75	1.08	.79	1.39	1.41	2.27	.99	.87	.87	.70	.37	12.15
1956	.47	.46	.46	.45	1.11	1.13	1.66	.81	.45	.53	.30	1.23	9.06
1957	.72	.72	1.12	.96	2.02	1.63	2.99	1.14	2.03	.96	.69	2.01	16.99
1958	1.74	2.93	2.25	2.20	1.76	2.07	3.83	2.74	1.60	1.28	1.63	.74	24.77
1959	.76	.71	1.61	1.46	1.07	1.28	2.00	1.18	.93	.66	1.13	1.87	14.86
1960	3.62	1.35	1.94	2.01	4.78	3.23	3.59	2.37	1.47	1.23	1.53	1.17	28.29

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	2,897	17.24
1951	1203	21,400	Dec. 9, 1950	895	2,555	1.12	15.22	2,439	14.53
1952	1233	27,000	Mar. 25, 1952	803	2,896	1.27	17.28	2,771	16.53
1953	1273	35,000	Mar. 25, 1953	620	2,504	1.10	14.90	2,442	14.52
1954	1333	35,900	Jan. 23, 1954	345	1,965	.862	11.69	2,062	12.28
1955	1383	31,000	Apr. 15, 1955	330	2,040	.895	12.15	1,855	11.05
1956	1433	30,500	Sept. 28, 1956	330	1,516	.665	9.06	1,712	10.23
1957	1503	33,400	Apr. 7, 1957	793	2,854	1.25	16.99	3,587	21.35
1958	1553	30,800	Apr. 29, 1958	1,220	4,163	1.83	24.77	3,518	20.93
1959	1623	28,700	Dec. 30, 1959	930	2,496	1.09	14.86	3,141	18.69
1960	1703	28,400	Oct. 11, 1959	1,620	4,740	2.08	28.29	-	-

1175. Rocky Creek at Turnersburg, N. C.

Location.--Lat 35°54', long 80°48', on right bank 1,000 ft downstream from bridge on U.S. Highway 21 at Turnersburg, Iredell County, 1 mile downstream from Mud Creek, and 1½ miles upstream from mouth.

Drainage area.--102 sq mi.

Records available.--April 1940 to September 1960. Prior to October 1956, published as Rocky River at Turnersburg.

Gage.--Water-stage recorder. Datum of gage is 724.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 19, 1950, at site 170 ft upstream at same datum.

Average discharge.--20 years (1940-60), 113 cfs.

Extremes.--1940-60: Maximum discharge, 6,080 cfs Jan. 22, 1954 (gage height, 13.69 ft), from rating curve extended above 3,400 cfs on basis of computation of peak flow over dam; minimum, 1 cfs Oct. 18, 1940, Oct. 26, 1941; minimum daily, 8.8 cfs Aug. 17, 18, 1956.

A stage of about 18 ft was reached by flood sometime during the years 1936-38, from information by local resident.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	84.4	72.1	116	80.5	132	114	170	83.1	88.6	78.6	51.8	39.0	92.2
1952	33.6	53.2	140	100	149	338	135	127	72.7	49.6	127	65.3	116
1953	51.4	60.1	64.2	119	194	222	102	76.8	115	49.5	37.4	44.2	94.1
1954	35.5	40.7	79.3	298	83.4	167	113	97.1	62.8	40.0	36.5	16.8	89.6
1955	24.3	45.4	68.7	58.3	111	75.1	153	70.7	62.1	56.4	49.7	27.6	66.4
1956	33.8	37.3	40.3	39.1	99.1	79.8	153	63.0	37.5	28.6	20.5	195	68.4
1957	62.0	52.8	95.1	83.2	195	124	188	74.8	191	78.7	53.2	220	117
1958	104	249	162	163	160	165	415	228	135	96.5	84.3	55.4	168
1959	62.0	63.6	131	115	95.3	104	171	99.0	72.5	55.9	97.9	208	106
1960	249	123	177	209	462	323	295	176	119	102	134	122	207

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.95	0.79	1.31	0.91	1.35	1.28	1.86	0.94	0.97	0.89	0.59	0.43	12.27
1952	.38	.58	1.58	1.13	1.57	3.82	1.47	1.43	.80	.56	1.44	.71	15.47
1953	.58	.66	.73	1.34	1.98	2.51	1.12	.87	1.26	.56	.42	.48	12.51
1954	.40	.45	.90	3.37	.85	1.89	1.24	1.10	.69	.45	.41	.18	11.93
1955	.27	.50	.78	.66	1.13	.85	1.68	.80	.68	.64	.56	.30	8.65
1956	.38	.41	.46	.44	1.05	.90	1.67	.71	.41	.32	.23	2.14	9.12
1957	.70	.58	1.05	.94	1.97	1.40	2.05	.85	2.09	.89	.60	2.41	15.53
1958	1.18	2.72	1.83	1.84	1.63	1.87	4.54	2.58	1.48	1.09	.95	.61	22.32
1959	.70	.70	1.48	1.30	.97	1.18	1.87	1.12	.79	.63	1.11	2.28	14.13
1960	2.81	1.35	2.00	2.37	4.88	3.65	3.22	1.99	1.31	1.15	1.51	1.33	27.57

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	115	15.29
1951	1203	1,110	Dec. 7, 1950	31	92.2	0.904	12.27	88.3	11.76
1952	1233	2,340	Mar. 11, 1952	27	116	1.14	15.47	112	14.90
1953	1273	1,990	Mar. 24, 1953	25	94.1	.923	12.51	92.4	12.29
1954	1333	6,080	Jan. 22, 1954	13	89.6	.878	11.93	88.1	11.73
1955	1383	1,370	Apr. 14, 1955	13	66.4	.651	8.65	64.2	8.55
1956	1433	4,480	Sept. 27, 1956	8.8	68.4	.671	9.12	78.5	10.20
1957	1503	4,620	Sept. 17, 1957	36	117	1.15	15.53	142	18.93
1958	1553	4,520	Apr. 28, 1958	46	168	1.65	22.32	146	19.47
1959	1623	a2,070	(b)	40	106	1.04	14.13	131	17.41
1960	1703	3,170	Feb. 1, 1960	68	207	2.03	27.57	-	-

a Maximum peak discharge; maximum discharge during year, 2,570 cfs at 12 p.m. Sept. 30, 1959, stage rising.

b Dec. 29, 1958, Sept. 7, 1959.

1180. South Yadkin River near Mocksville, N. C.

Location.--Lat 35°51', long 80°40', on right bank at downstream side of highway bridge, 1 mile upstream from Little Creek, 4 miles downstream from Fifth Creek, 4½ miles upstream from Hunting Creek, and 6½ miles southwest of Mocksville, Davie County.

Drainage area.--313 sq mi.

Records available.--October 1938 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 660 ft (by barometer).

Average discharge.--22 years (1938-60), 324 cfs.

Extremes.--1938-60: Maximum discharge, 9,240 cfs Jan. 23, 1954 (gage height, 16.73 ft); minimum, 30 cfs Aug. 14, 16, 1956. Maximum stage known, 22.6 ft Oct. 3, 1929, from floodmark established by local resident.

Remarks.--Records of chemical analyses for the period October 1953 to September 1954 and suspended-sediment loads for the period January 1958 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	232	200	333	227	385	330	478	224	227	184	166	105	257
1952	92.5	152	409	337	444	1,112	391	343	224	144	340	194	349
1953	138	166	198	355	582	664	280	212	373	149	99.8	179	280
1954	99.5	114	264	883	293	505	328	258	154	109	91.1	45.7	263
1955	70.4	130	200	175	353	220	487	185	168	146	130	72.0	193
1956	98.3	99.7	102	97.7	316	251	476	194	106	95.0	61.2	467	195
1957	169	162	290	256	689	368	530	212	514	186	143	591	338
1958	265	791	455	471	445	430	1,110	680	397	253	240	159	474
1959	187	195	392	352	518	345	537	281	232	180	256	542	317
1960	835	344	485	527	1,458	815	922	455	316	291	375	323	592

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.85	0.71	1.23	0.84	1.28	1.22	1.70	0.83	0.68	0.68	0.61	0.37	11.13
1952	.34	.54	1.51	1.24	1.53	4.10	1.39	1.26	.80	.53	1.25	.69	15.18
1953	.51	.59	.69	1.31	1.94	2.44	1.00	.78	1.33	.55	.37	.64	12.15
1954	.37	.41	.97	3.25	.97	1.86	1.17	.95	.55	.40	.34	.16	11.40
1955	.26	.46	.74	.64	1.17	.81	1.73	.68	.60	.54	.48	.26	8.37
1956	.36	.36	.37	.36	1.09	.92	1.70	.71	.38	.35	.23	1.66	8.49
1957	.62	.58	1.07	.94	2.29	1.36	1.89	.78	1.83	.68	.53	2.11	14.68
1958	.96	2.82	1.68	1.73	1.48	1.59	3.96	2.51	1.42	.93	.88	.57	20.55
1959	.69	.69	1.44	1.29	1.06	1.27	1.91	1.04	.83	.66	.94	1.93	13.75
1960	3.07	1.23	1.79	1.94	5.02	3.00	3.29	1.68	1.12	1.07	1.38	1.15	25.74

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	341	14.78
1951	1203	1,660	Apr. 9, 1959	76	257	0.821	11.13	247	10.73
1952	1233	3,150	Mar. 5, 12, 1952*	80	349	1.12	15.18	335	14.58
1953	1273	3,450	Mar. 23, 1953	60	280	.895	12.15	279	12.12
1954	1333	9,240	Jan. 23, 1954	38	263	.840	11.40	256	11.11
1955	1383	2,900	Apr. 15, 1955	35	193	.617	8.37	185	8.00
1956	1433	5,760	Sept. 28, 1956	32	195	.623	8.49	222	9.67
1957	1503	6,550	Sept. 18, 1957	96	338	1.08	14.68	412	17.89
1958	1553	6,750	Apr. 29, 1958	140	474	1.51	20.55	412	17.89
1959	1623	3,080	Sept. 8, 1959	117	317	1.01	13.75	393	17.02
1960	1703	4,370	Feb. 2, 1960	194	592	1.89	25.74	-	-

* Revised.

1185. Hunting Creek near Harmony, N. C.

Location.--Lat 36°00', long 80°44', on right bank at downstream side of highway bridge, three-quarters of a mile downstream from Kennedy Creek, 1 mile east of Houstonville, Iredell County, 2 miles downstream from U.S. Highway 21, and 3½ miles northeast of Harmony.

Drainage area.--153 sq mi.

Records available.--October 1950 to September 1960. Monthly discharge only prior to January 1951.

Gage.--Water-stage recorder. Altitude of gage is 731 ft (by barometer). Prior to Apr. 5, 1951, wire-weight gage on upstream side of bridge at same datum.

Average discharge.--10 years (1950-60), 187 cfs.

Extremes.--1950-60: Maximum discharge, 6,210 cfs Apr. 28, 1958 (gage height, 18.80 ft); minimum, 18 cfs Oct. 8, 1954.

Remarks.--Diurnal fluctuation at low flow caused by mill above station. Records of chemical analyses for the period October 1952 to September 1953 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	138	119	188	124	227	200	287	140	171	125	97.9	59.6	156
1952	57.1	95.7	232	159	218	440	282	230	137	88.0	163	103	184
1953	76.9	101	106	179	296	386	180	125	163	103	87.7	70.0	155
1954	54.3	64.9	136	348	162	266	177	173	108	78.5	81.7	40.4	141
1955	50.0	83.1	131	103	190	143	236	112	113	81.7	79.7	45.6	113
1956	65.9	56.9	53.1	56.4	145	123	237	103	63.3	49.4	43.5	225	101
1957	85.0	82.2	124	127	274	201	303	145	332	180	113	313	189
1958	186	366	273	294	267	315	674	422	254	168	160	111	292
1959	117	113	250	212	185	191	301	192	142	106	113	352	189
1960	406	190	304	366	752	522	524	291	185	154	210	270	346

† Corrected.

* Not previously published; partly estimated on basis of records for Rocky Creek at Turnersburg and South Yadkin River near Mocksville.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.04	0.87	1.42	0.93	1.55	1.51	2.09	1.05	1.25	0.94	0.74	0.43	13.82
1952	.43	.68	1.75	1.20	1.54	3.31	2.05	1.74	1.00	.66	1.23	.75	16.34
1953	.58	.74	.80	1.35	2.02	2.91	1.31	.94	1.19	.77	.66	.51	13.78
1954	.41	.47	1.03	2.63	1.10	2.00	1.29	1.30	.79	.59	.62	.29	12.52
1955	.38	.61	.99	.78	1.29	1.08	1.72	.85	.83	.62	.60	.33	10.08
1956	.50	.42	.40	.42	1.02	.93	1.73	.78	.46	.37	.33	1.64	9.00
1957	.64	.60	.94	.95	1.87	1.52	2.21	1.09	2.42	1.36	.85	2.28	16.73
1958	1.40	2.67	2.06	2.22	1.95	2.38	4.92	3.18	1.85	1.27	1.20	.81	25.91
1959	1.88	.82	1.88	1.60	1.26	1.44	2.20	1.45	1.04	.80	.85	2.56	16.78
1960	3.06	1.39	2.29	2.76	5.30	3.93	3.82	2.19	1.35	1.16	1.58	1.97	30.80

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1203	2,550	Feb. 7, 1951	49	156	1.02	13.82	150	13.35
1952	1233	3,570	Mar. 11, 1952	43	184	1.20	16.34	175	15.60
1953	1273	3,620	Mar. 24, 1953	44	155	1.01	13.78	153	13.57
1954	1333	6,110	Jan. 22, 1954	28	141	.922	12.52	142	12.59
1955	1363	2,530	Feb. 7, 1955	23	113	.739	10.08	106	9.42
1956	1433	4,810	Sept. 27, 1956	22	101	.660	9.00	111	9.86
1957	1503	4,690	Sept. 17, 1957	62	189	1.24	16.73	233	20.68
1958	1553	6,210	Apr. 28, 1958	97	292	1.91	25.91	263	23.36
1959	1623	4,400	(a)	58	189	1.24	16.78	225	19.94
1960	1703	4,530	Oct. 11, 1959	113	346	2.26	30.80	-	-

† Corrected.

* Not previously published.

a Dec. 29, 1958, Sept. 30, 1959.

1190. South Yadkin River at Coolee, N. C.

Location.--Lat 35°48', long 80°34', on left bank 150 ft downstream from tailrace of Erwin Cotton Mills at Coolee, Davie County, 550 ft upstream from bridge on State Highway 801, 2½ miles downstream from Bear Creek, and 2½ miles upstream from Third Creek.

Drainage area.--569 sq mi.

Records available.--June 1928 to September 1960. Monthly discharge only for some periods, published in WSP 1933. Figures of discharge above 2,000 cfs are subject to error owing to absence of sufficient information to make corrections for backwater from tributary inflow and High Rock Lake.

Gage.--Water-stage recorder. Datum of gage is 624.57 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers).

Average discharge.--32 years (1928-60), 631 cfs.

Extremes.--1928-60: Maximum discharge, 24,800 cfs Oct. 3, 1929 (gage height, 32.25 ft), from rating curve extended above 7,500 cfs on basis of computation of peak flow over dam half a mile upstream; minimum, 10 cfs Nov. 25, 1931 (gage height, 0.40 ft); minimum daily, 23 cfs Oct. 12, 19, 1941.
Flood of July 16, 1916, reached a stage of 27.2 ft, from floodmark in Erwin Cotton Mill.

Remarks.--Large diurnal fluctuation and slight regulation during low and medium flow caused by Erwin Cotton Mill above station. Records of chemical analyses and water temperatures for the period October 1955 to September 1956 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	429	361	597	385	722	635	949	410	437	359	287	188	476
1952	157	252	754	624	789	2,068	756	660	367	244	571	349	634
1953	229	295	334	659	1,119	1,357	526	373	587	272	202	327	519
1954	167	193	508	1,655	567	1,033	616	477	302	215	196	92.5	503
1955	156	255	404	319	707	413	933	356	313	231	228	120	366
1956	175	192	183	181	624	481	888	365	190	178	122	873	367
1957	324	316	582	465	1,366	776	1,088	402	1,016	457	282	1,178	680
1958	566	1,472	905	965	885	873	2,244	1,486	803	465	459	282	948
1959	309	321	802	680	627	666	1,063	501	409	332	478	1,092	605
1960	1,691	604	892	1,011	2,994	1,651	1,828	894	574	525	644	667	1,157

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.87	0.71	1.21	0.78	1.32	1.29	1.86	0.83	0.86	0.69	0.58	0.37	11.37
1952	.32	.49	1.53	1.26	1.50	4.19	1.48	1.34	.72	.49	1.16	.69	15.16
1953	.46	.58	.68	1.54	2.05	2.75	1.03	.76	1.15	.55	.41	.64	12.40
1954	.54	.38	1.03	5.35	1.04	2.09	1.21	.97	.59	.43	.40	.18	12.01
1955	.32	.50	.82	.65	1.29	.84	1.83	.72	.61	.47	.46	.24	8.75
1956	.35	.36	.37	.37	1.18	.97	1.74	.74	.37	.36	.25	1.71	8.77
1957	.66	.62	1.18	.94	2.50	1.57	2.13	.82	1.99	.93	.57	2.31	16.22
1958	1.15	2.89	1.83	1.96	1.62	1.77	4.40	3.01	1.57	.94	.93	.55	22.62
1959	.63	.63	1.62	1.38	1.15	1.35	2.08	1.01	.80	.67	.97	2.14	14.43
1960	3.43	1.18	1.81	2.05	5.68	3.35	3.58	1.81	1.13	1.06	1.51	1.31	27.70

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	-	614	14.65
1951	1203	3,210	Apr. 9, 1951	55	476	0.837	11.37	458	10.92	
1952	1233	5,780	Mar. 25, 1952	27	634	1.11	15.16	608	14.54	
1953	1273	6,450	Mar. 24, 1953	82	519	.912	12.40	521	12.43	
1954	1353	15,200	Jan. 24, 1954	37	503	.884	12.01	499	11.90	
1955	1383	5,580	Apr. 15, 1955	39	366	.643	8.75	343	8.19	
1956	1433	9,100	Sept. 28, 1956	56	367	.645	8.77	424	10.15	
1957	1503	9,610	Sept. 18, 1957	141	680	1.20	16.22	823	19.63	
1958	1553	12,500	Apr. 29, 1958	235	948	1.67	22.62	823	19.63	
1959	1623	6,560	Sept. 8, 1959	184	605	1.06	14.43	753	17.97	
1960	1703	9,080	Feb. 2, 1960	351	1,157	2.03	27.70	-	-	

1194. Third Creek subwatershed No. 7A (Third Creek) near Stony Point, N. C.

Location.--Lat 35°52', long 81°04', on left bank 200 ft upstream from dam on Third Creek, 900 ft upstream from highway bridge, 1¼ miles northwest of Stony Point, Alexander County, and 2¼ miles upstream from Alexander-Iredell County line.

Drainage area.--4.84 sq mi.

Records available.--December 1955 to September 1960.

Gage.--Water-stage recorder and sharp-crested weir. Datum of gage is 976 ft above mean sea level (levels by Soil Conservation Service).

Extremes.--1955-60: Maximum outflow, 67 cfs Sept. 27, 1956, Sept. 17, 1957; maximum gage height, 14.42 ft Sept. 27, 1956; no flow May 10-15, 1956, Sept. 9-11, 1960 (result of reservoir storage). Maximum inflow, 540 cfs (average of 30-minute period) June 1, 1958, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

Remarks.--Records of monthly and yearly discharge are outflow from reservoir, determined from stage-discharge relation for outlet structure. Reservoir is formed by earth dam; dam completed and storage began in December 1955. Outlet structure is 3 by 3 by 9-foot concrete drop inlet connected to a 24-inch concrete outlet pipe. Top of drop inlet is at elevation 978 ft. A 2-foot sharp-crested rectangular weir is set in one side of the drop inlet with crest at elevation 977 ft. There is an emergency spillway at elevation 1,003 ft. Top of dam embankment is 1,010 ft. There is an 18-inch diameter cleanout gate at elevation 969.5 ft at bottom of drop inlet. Available capacity, 876 acre-ft between elevations 977 ft (crest of weir) and 1,003 ft (crest of spillway). Records of suspended-sediment loads for the period October 1957 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1956	-	-	-	1.92	7.22	7.34	8.50	2.85	2.97	2.75	1.89	10.1	-
1957	3.44	2.69	5.07	4.30	10.9	5.26	9.70	3.50	9.10	2.61	2.58	10.8	5.76
1958	4.48	12.0	7.61	7.75	7.88	7.97	18.0	12.2	9.39	4.60	3.48	2.56	8.14
1959	3.22	3.32	7.67	5.44	5.01	6.51	10.15	3.93	3.35	5.01	5.89	9.01	5.71
1960	14.1	6.06	10.9	10.2	23.7	15.5	15.6	8.01	4.87	5.26	9.05	5.35	10.7

Contents, in acre-feet, at end of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1956	-	-	4.61	6.59	10.91	-2.60	-3.60	10.00	5.24	5.12	3.34	12.83	-
1957	8.34	6.72	8.70	96.54	18.80	8.83	8.46	7.50	8.10	7.74	5.60	14.52	-
1958	8.6	13.4	11.7	13.5	16.0	18.9	122	12.1	9.5	8.2	5.7	6.8	-
1959	7.5	9.1	14.1	9.4	9.0	11.7	10.8	11.7	6.7	8.5	16.0	188	-
1960	15.4	14.6	13.0	116	14.5	168	14.1	12.6	14.0	20.6	9.7	11.4	-

Note.--Contents for water years 1956-57 not previously published. Negative figures indicate water surface was below crest of weir.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Maximum outflow		Maximum inflow a/		Minimum daily outflow	Mean outflow	Mean outflow	
		Discharge	Date	Discharge	Date				
1956	1503	b67	Sept. 27, 1956	b394	Apr. 15, 1956	0	-	4.70	
1957	1503	67	Sept. 17, 1957	c514	Sept. 17, 1957	1.9	5.76	6.83	
1958	1553	66	Apr. 28-29, 1958*	540	June 1, 1958	2.2	8.14	7.35	
1959	1623	62	Sept. 30, 1959	d420	Sept. 30, 1959	2.2	5.71	7.11	
1960	1703	63	Mar. 31, 1960	e506	Mar. 30, 1960	0	10.7	-	

* Revised.

a Average for 30-minute interval, except as noted; computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time interval used.

b Maximum during period Dec. 22 to Sept. 30.

c Average for 60-minute interval.

d Average for 20-minute interval.

e Average for 15-minute interval.

1195. Third Creek subwatershed No. 21 (Il Creek) at Troutman, N. C.

Location.--Lat 35°42', long 80°53', on right bank 150 ft upstream from dam, a quarter of a mile upstream from highway bridge, 1 mile east of Troutman, Iredell County, and 3¼ miles upstream from mouth.

Drainage area.--1.62 sq mi.

Records available.--December 1954 to September 1956.

Gage.--Water-stage recorder and sharp-crested weir. Datum of gage is 871.0 ft above mean sea level (levels by Soil Conservation Service).

Extremes.--1954-56: Maximum outflow, 56 cfs Apr. 14, 1955, and Feb. 6, 1956; maximum gage height, 3.73 ft Apr. 14, 1955; minimum outflow, 0.1 cfs Sept. 19, 1956. Maximum inflow, 151 cfs (average for 30-minute period) Feb. 6, 1956, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

Remarks.--Records of monthly and yearly discharge are outflow from reservoir, determined from stage-discharge relation for outlet structure. Reservoir is formed by earth dam; dam completed and storage began Nov. 1, 1954. Outlet structure is a 3 by 3 by 12-foot concrete drop inlet connected to a 24-inch concrete outlet pipe. Top of drop inlet is at elevation 873.0 ft. A 2-foot sharp-crested rectangular weir is set in one side of the drop inlet with crest at elevation 872.0 ft. There is an emergency spillway at elevation 895.0 ft. Available capacity, 337 acre-ft between elevations 872.0 and 895.0 ft.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1955	-	-	1.18	0.91	1.99	1.09	2.78	0.98	0.59	0.67	0.81	0.42	-
1956	0.71	0.61	.62	.71	2.56	1.35	2.23	1.51	.66	.76	.49	2.28	1.20

Contents, in acre-feet, at end of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1955	-	2.88	1.84	3.92	2.16	2.16	1.92	1.36	1.20	1.12	0.96	5.60	-
1956	1.12	1.36	1.44	1.60	2.08	1.84	2.24	1.68	1.04	1.52	1.44	6.40	-

Note.--Not previously published.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Maximum outflow		Maximum inflow a/		Minimum daily outflow	Mean outflow	Mean outflow	
		Discharge	Date	Discharge	Date				
1955	1503	b56	Apr. 14, 1955	-	-	b0.2	-	-	1.01
1956	1503	56	Feb. 6, 1956	151	Feb. 6, 1956	.1	1.20	-	-

a Average for 30-minute interval; computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time interval used.

b Maximum during period December to September.

1205. Third Creek at Cleveland, N. C.

Location.--Lat 35°45', long 80°41', on left bank 200 ft downstream from highway bridge, three-quarters of a mile north of Cleveland, Rowan County, and 7 miles upstream from Fourth Creek.

Drainage area.--87.4 sq mi.

Records available.--April 1940 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 684.47 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to May 22, 1950, on right bank at site 200 ft upstream at same datum.

Average discharge.--20 years (1940-60), 91.0 cfs.

Extremes.--1940-60: Maximum discharge, 3,080 cfs about Sept. 19, 1945 (gage height, 15.76 ft, from floodmarks), from rating curve extended above 900 cfs by logarithmic plotting; minimum, 10 cfs Sept. 19, 20, Oct. 7, 1954, Sept. 18, 19, 21, 22, 1956 (gage height, 0.20 ft).

Maximum stage known, 22.5 ft, sometime in July 1916, from floodmark witnessed by local resident. Creek channel improved considerably by dredging since 1916.

Remarks.--Prior to September 1959, city of Statesville diverted about 1 cfs sewage effluent into basin above station. Nine flood detention reservoirs (combined capacity 3,371 acre-ft) constructed and placed in operation upstream during period 1954-60. Main stem creek banks cleared of vegetation from point 4 miles below gage to Third Creek Subwatershed No. 7A near Stony Point in the headwaters. Clearing began in 1955 and was completed in 1958.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	54.3	49.7	77.0	56.6	89.7	85.4	101	51.0	44.3	52.0	37.9	29.4	60.5
1952	24.1	36.7	122	120	116	359	99.6	70.2	46.8	37.5	97.4	46.5	98.3
1953	34.4	40.5	50.5	98.6	162	180	67.3	50.8	71.7	32.9	28.7	36.8	70.6
1954	24.5	27.2	72.7	245	82.6	171	80.2	58.2	43.6	27.7	23.7	15.1	72.9
1955	20.1	30.6	54.9	45.9	106	56.0	123	45.6	38.7	39.8	31.3	17.6	50.3
1956	43.3	30.1	29.0	28.7	125	79.4	119	64.2	34.1	50.0	20.3	126	61.8
1957	48.9	51.9	97.0	84.2	245	109	133	53.5	95.2	39.0	34.6	109	90.4
1958	51.9	260	115	135	134	121	303	187	95.6	63.0	51.6	33.7	129
1959	43.7	43.9	115	91.5	95.9	120	154	64.4	94.0	63.2	104	144	94.3
1960	239	95.4	127	175	411	256	209	114	101	74.7	81.3	73.8	162

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.72	0.63	1.02	0.75	1.07	1.13	1.29	0.67	0.57	0.69	0.50	0.38	9.42
1952	.32	.47	1.61	1.58	1.43	4.74	1.27	.93	.60	.49	1.28	.59	15.31
1953	.45	.52	.67	1.30	1.93	2.37	.86	.67	.92	.43	.38	.47	10.97
1954	.32	.35	.96	3.23	.98	2.26	1.02	.77	.56	.37	.31	.19	11.32
1955	.27	.39	.72	.61	1.26	.74	1.57	.60	.49	.52	.41	.22	7.80
1956	.57	.38	.38	.38	1.54	1.05	1.52	.85	.44	.66	.27	1.60	9.64
1957	.65	.66	1.28	1.11	2.92	1.44	1.70	.71	1.21	.51	.46	1.39	14.04
1958	.68	3.32	1.52	1.78	1.59	1.60	3.87	2.46	1.22	.83	.68	.43	19.96
1959	-	-	-	-	-	-	-	-	-	-	-	-	14.66
1960	-	-	-	-	-	-	-	-	-	-	-	-	25.27

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	85.9	13.34
1951	1203	699	Feb. 7, July 29	20	60.5	0.692	9.42	60.7	9.45
1952	1233	1,920	Mar. 5, 1952	20	98.3	1.12	15.31	95.5	14.55
1953	1273	1,620	Mar. 25, 1953	17	70.6	.808	10.97	70.6	10.96
1954	1333	2,260	Jan. 24, 1954	11	72.9	.834	11.32	71.3	11.07
1955	1383	959	Apr. 15, 1955	11	50.3	.576	7.80	50.0	7.75
1956	1433	1,460	Sept. 27, 1956	10	61.8	.707	9.64	69.9	10.90
1957	1503	2,070	Feb. 1, 1957	23	90.4	1.03	14.04	109	16.97
1958	1553	1,900	Apr. 29, 1958	30	129	1.48	19.98	110	17.10
1959	1623	1,380	Dec. 28-29, 1958	36	94.3	1.08	14.66	116	18.05
1960	1703	2,120	Feb. 1, 1960	53	162	1.85	25.27	-	-

1215. Abbotts Creek at Lexington, N. C.

Location.--Lat 35°48'24", long 80°14'06", on right bank 200 ft downstream from small tributary, 300 ft upstream from highway bridge, 0.6 mile downstream from bridge on U.S. Highway 64, 1½ miles southeast of Lexington, Davidson County, 4.9 miles downstream from Rich Fork.

Drainage area.--174 sq mi.

Records available.--March 1940 to December 1957.

Gage.--Water-stage recorder. Datum of gage is 622.55 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 28, 1949, at site 600 ft upstream at present datum.

Average discharge.--17 years (1940-57), 158 cfs.

Extremes.--1940-57: Maximum discharge, 14,800 cfs Sept. 25, 1947 (gage height, 22.12 ft, site then in use, from floodmarks); minimum, 0.4 cfs Oct. 8, 1954 (gage height, 0.89 ft).

Remarks.--The town of Lexington diverts an average of 3 cfs above station for water supply. City of High Point discharges about 3 cfs sewage effluent diverted from Deep River (Cape Fear River basin) into Rich Fork above station. The town of Thomasville takes its water supply from Abbotts Creek but since its sewage is returned above this station no appreciable diversion is affected. Thomasville diversion figures published in WSP 1433 and 1503 are in error and should not be used. Abbotts Creek Water Supply Lake at Lexington, N. C. completed in 1957. Storage began in July 1957 (revised). Usable storage, 6,460.5 acre-ft. Dead storage, 61.3 acre-ft. Records of chemical analyses for the period October 1956 to September 1958 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	44.4	50.9	108	79.5	147	162	280	45.2	84.9	68.9	45.0	18.0	93.9
1952	7.12	32.3	326	261	288	911	170	103	50.5	20.5	163	172	209
1953	28.0	56.2	172	359	635	407	145	58.3	245	31.6	48.7	23.6	181
1954	13.9	17.1	117	575	101	272	278	72.6	29.1	18.4	49.6	7.08	130
1955	256	155	342	125	356	146	280	70.6	21.9	30.7	205	45.5	168
1956	76.2	47.0	35.8	40.9	394	199	219	115	66.5	34.2	11.1	178	116
1957	43.8	74.5	177	156	643	233	281	48.9	277	70.5	18.0	44.9	168
1958	28.3	335	228	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.29	0.33	0.71	0.53	0.88	1.07	1.80	0.30	0.54	0.46	0.30	0.12	7.33
1952	.05	.21	2.16	1.73	1.79	6.03	1.09	.69	.32	.14	1.08	1.10	16.39
1953	.18	.36	1.14	2.38	3.80	2.69	.93	.39	1.57	.21	.32	.15	14.12
1954	.09	.11	.77	3.81	.61	1.81	1.78	.48	.19	.12	.33	.05	10.15
1955	1.70	1.00	2.27	.83	2.13	.96	1.80	.47	.14	.20	1.36	.29	13.15
1956	.50	.30	.24	.27	2.44	1.32	1.40	.76	.43	.23	.07	1.14	9.10
1957	.29	.48	1.18	1.04	3.85	1.54	1.80	.32	1.77	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	-	-	8.55
1951	1203	1,140	Mar. 14, 1951	5.0	93.9	0.540	7.33	110	108	8.42
1952	1233	7,470	Mar. 4, 1952	5.1	209	1.20	16.39	200	156.65	
1953	1273	4,030	Feb. 22, 1953	8.3	181	1.04	14.12	172	13.41	
1954	1333	4,890	Jan. 23, 1954	3.4	130	.747	10.15	181	14.15	
1955	1383	5,700	Oct. 16, 1954	.9	168	.966	13.15	118	9.22	
1956	1433	2,970	Sept. 27, 1956	2.4	116	.667	9.10	128	10.01	
1957	1503	7,420	Feb. 1, 1957	7.1	168	-	-	193	-	
1958	-	3,360	Nov. 26, 1957	-	-	-	-	-	-	
1959	-	-	-	-	-	-	-	-	-	
1960	-	-	-	-	-	-	-	-	-	

a Maximum during period October to December.

1224. High Rock Lake at High Rock, N. C.

Location.--Lat 35°36'02", long 80°14'06", at dam on Yadkin River 0.8 mile northwest of High Rock, Davidson County, 2 miles upstream from Lick Creek, and at mile 252.3.

Drainage area.--4,000 sq mi, approximately.

Records available.--November 1927 to September 1960.

Gage.--Water-stage recorder and staff gage. Datum of gage is 30.9 ft (revised) below mean sea level, datum of 1929.

Remarks.--Lake used for hydroelectric power development was first put in operation Nov. 7, 1927. Total capacity is 11,090,000,000 cu ft and usable capacity is 10,230,000,000 cu ft between elevations 625 and 655 ft (top of gates). Figures given herein represent total contents. Records previously published as change in contents, equivalent in cubic feet per second.

Cooperation.--Records furnished by Yadkin, Inc. (formerly Carolina Aluminum Co.).

Water year	Contents, in millions of cubic feet, on last day of month											
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	0	7,932	4,461	6,914	8,502	11,025	11,058	10,960	9,725	10,928	11,025
1929	11,025	9,878	8,172	6,552	10,700	11,058	11,025	10,960	11,058	10,505	8,338	5,376
1930	10,992	11,058	11,058	10,895	10,635	10,765	8,784	6,412	10,472	3,195	3,393	2,330
1931	1,072	1,570	3,256	4,604	2,892	5,397	11,025	11,090	8,784	9,158	10,992	8,195
1932	4,543	2,664	4,291	11,090	10,321	10,668	11,025	10,850	10,159	5,363	5,439	3,433
1933	11,058	11,077	10,882	11,070	10,440	10,947	10,824	10,002	8,624	6,842	7,618	9,797
1934	2,538	1,327	1,262	882	4,896	10,973	10,921	11,070	10,315	11,032	11,077	11,025
1935	9,996	9,828	11,064	11,051	11,084	10,739	10,862	10,973	7,706	10,084	7,207	6,904
1936	3,681	3,237	1,001	11,058	10,732	10,992	11,045	9,048	9,158	8,426	9,990	6,142
1937	9,743	4,682	9,365	10,674	11,032	10,512	11,058	10,264	7,539	3,872	9,036	6,004
1938	11,058	9,815	6,250	5,978	4,155	5,055	4,025	4,714	9,042	11,090	9,158	4,899
1939	2,441	4,393	6,066	6,575	11,025	11,090	10,765	7,985	6,203	10,830	10,700	6,528
1940	2,198	1,268	2,064	1,244	3,736	4,155	6,769	7,828	8,255	8,200	10,895	8,420
1941	3,262	6,250	5,978	5,934	4,750	6,672	7,262	2,920	2,920	10,570	9,100	5,586
1942	2,518	1,959	2,581	2,318	6,473	10,103	6,720	10,396	9,014	6,691	8,956	7,565
1943	4,257	5,657	10,128	11,090	9,014	10,895	10,661	7,948	9,347	10,390	9,761	8,830
1944	7,545	6,514	4,328	5,594	11,031	11,051	10,785	9,653	6,551	10,128	6,133	10,875
1945	10,538	9,569	9,112	9,106	11,032	9,996	10,271	9,112	5,363	9,467	6,394	11,090
1946	9,002	7,770	10,999	10,752	10,824	10,960	9,671	10,642	6,188	3,878	5,384	3,745
1947	3,240	2,755	2,174	10,765	6,528	6,624	8,255	7,775	10,505	6,672	4,532	6,909
1948	11,005	11,051	8,646	8,646	10,817	11,058	9,872	10,538	8,530	6,315	8,698	4,485
1949	3,454	11,025	11,058	9,878	10,960	11,050	10,960	9,635	9,455	10,700	11,205	10,378
1950	10,960	10,960	8,640	8,870	9,275	10,830	9,575	10,960	8,530	9,187	9,755	8,200
1951	6,624	5,418	8,812	6,914	7,722	8,755	10,895	9,455	10,065	10,570	9,100	9,575
1952	8,255	7,932	10,378	9,335	9,515	11,090	11,025	9,455	9,575	9,215	10,700	9,042
1953	8,348	10,340	9,695	10,700	10,960	11,025	9,455	10,190	10,609	9,215	9,455	10,002
1954	10,002	9,515	8,090	10,505	10,065	10,190	8,420	8,985	8,640	6,250	7,880	5,376
1955	5,934	4,189	6,066	4,393	7,414	6,624	10,427	8,148	6,110	5,376	5,211	4,899
1956	4,058	2,568	1,638	823	3,672	5,016	9,456	8,364	5,890	5,016	2,441	10,001
1957	8,364	5,172	6,963	3,424	11,018	10,554	10,619	8,869	10,879	9,759	7,161	10,879
1958	9,396	11,018	10,619	11,018	11,018	11,018	11,090	10,490	10,182	9,215	9,336	3,928
1959	2,492	2,492	9,819	10,947	9,456	8,700	10,813	8,813	8,644	10,365	10,748	9,819
1960	10,813	9,336	10,947	10,619	11,018	11,018	11,018	10,947	10,061	9,275	9,096	5,978

1225. Yadkin River at High Rock, N. C.

Location.--Lat 35°35'46", long 80°13'59", on right bank 0.3 mile downstream from High Rock Dam, 0.6 mile west of High Rock, Davidson County, 1½ miles upstream from Lick Creek, and at mile 252.

Drainage area.--4,000 sq mi, approximately.

Records available.--January 1919 to November 1927, November 1941 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 558.68 ft above mean sea level, datum of 1929, and 589.58 ft (revised) above Yadkin Inc. (formerly Carolina Aluminum Co.) datum. January 1919 to November 1927 at datum 590.00 ft lower.

Average discharge.--26 years (1919-27, 1942-60), 4,685 cfs (adjusted for storage).

Extremes.--1919-27, 1941-60: Maximum discharge, 85,000 cfs (estimated) July 21, 1919; minimum, 10 cfs Aug. 10, 1942, Nov. 20, 21, 1955, Aug. 12, Sept. 2, 1957; minimum daily, 11 cfs Nov. 20, 1955.
Maximum stage known, 22.1 ft (present datum) in July 1916, from floodmarks, from records by Tallassee Power Co.

Remarks.--Except for major floods, flow completely regulated by High Rock Lake since 1927 (usable capacity, 10,230,000,000 cu ft). Records of chemical analyses and water temperatures for period October 1947 to September 1948 are published in report of the Geological Survey.

Revisions.--The momentary maximum discharge for the water year 1944, published in WSP 1303, has been revised to 41,600 cfs Mar. 30, 1944. The same discharge also occurred at 12 p.m. Sept. 30, 1940, stage rising.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,436	3,028	3,657	3,721	4,838	4,461	6,951	3,674	3,136	2,483	2,803	1,258	3,611
1952	1,564	2,129	4,964	5,098	6,038	13,960	5,858	5,151	2,650	2,000	5,464	5,334	4,672
1953	1,744	1,537	3,143	5,048	9,187	10,060	4,552	2,550	3,357	2,285	1,289	1,476	3,820
1954	1,028	1,435	3,962	8,512	4,355	6,450	5,256	3,049	2,252	2,245	768	1,508	3,402
1955	2,153	2,869	3,381	3,292	4,445	4,405	5,657	3,564	3,014	2,452	2,295	1,188	3,217
1956	1,929	1,842	1,614	1,478	4,072	3,391	3,672	3,154	2,340	2,204	1,745	2,061	2,449
1957	2,683	3,427	3,289	4,267	6,160	5,663	8,640	3,357	5,124	2,930	2,685	4,467	4,365
1958	4,962	9,402	6,778	6,817	6,142	5,985	13,440	9,375	4,758	3,844	3,967	3,901	6,604
1959	2,540	2,086	2,644	4,577	5,192	4,753	6,056	4,112	2,957	2,484	3,967	6,293	3,942
1960	10,971	4,774	5,498	7,286	18,422	11,104	11,742	6,975	4,546	3,571	4,105	4,643	7,760

Monthly and yearly runoff, in inches (adjusted) a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.82	0.72	1.42	0.87	1.34	1.40	2.16	0.90	0.94	0.77	0.65	0.40	12.39
1952	.31	.56	1.70	1.36	1.65	4.20	1.57	1.31	.75	.54	1.15	.75	15.85
1953	.43	.64	.84	1.57	2.42	2.90	1.10	.81	.98	.51	.40	.47	13.07
1954	.30	.35	.99	2.71	1.08	1.87	1.27	.94	.59	.39	.40	.15	11.04
1955	.68	.61	1.18	.77	1.48	1.19	1.99	.78	.62	.63	.64	.30	10.87
1956	.47	.36	.36	.34	1.40	1.12	1.50	.79	.39	.54	.23	1.38	8.88
1957	.60	.61	1.14	.85	2.42	1.58	2.42	.78	1.64	.72	.49	1.65	14.90
1958	1.27	2.90	1.91	2.01	1.60	1.73	3.76	2.64	1.29	1.00	1.15	.51	21.67
1959	.58	.58	1.54	1.38	1.19	1.29	1.92	.97	.81	.90	1.19	1.65	14.00
1960	3.27	1.17	1.75	2.06	5.02	3.20	3.28	2.01	1.17	.94	1.16	.96	25.99

a Adjusted for change in contents in High Rock Lake.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30								Calendar year		
		Observed				Adjusted a/				Observed	Adjusted a/	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	
		Discharge	Date									
1950	-	-	-	-	-	-	-	-	4,320	4,325	14.68	
1951	1203	24,700	Apr. 10, 1951	25	3,611	3,655	0.914	12.39	3,489	3,539	12.00	
1952	1233	48,400	Mar. 24, 1952	15	4,672	4,655	1.16	15.85	4,484	4,462	12.19	
1953	1273	54,000	Mar. 25, 1953	23	3,820	3,850	.962	13.07	3,821	3,770	12.80	
1954	1333	56,400	Jan. 24, 1954	20	3,402	3,255	.814	11.04	3,567	3,503	11.87	
1955	1383	46,800	Apr. 16, 1955	21	3,217	3,202	.800	10.87	2,963	2,823	9.59	
1956	1433	9,100	Sept. 29, 1956	11	2,449	2,610	.652	8.88	2,785	2,953	10.04	
1957	1503	39,300	Apr. 6, 1957	19	4,365	4,393	1.10	14.90	5,346	5,462	18.53	
1958	1553	54,000	Apr. 29, 1958	36	6,604	6,384	1.60	21.67	5,446	5,421	18.39	
1959	1623	27,100	Sept. 8, 1959	21	3,942	4,129	1.03	14.00	5,122	5,158	17.49	
1960	1703	48,400	Feb. 18, 1960	42	7,760	7,639	1.91	25.99	-	-	-	

a Adjusted for change in contents in High Rock Lake.

1228.44. Badin Lake near Badin, N. C.

Location.--Lat 35°25'10", long 80°05'34" (revised), at dam on Yadkin River, 1½ miles north-east of Badin, Stanly County, 2½ miles upstream from Falls Dam, 4 miles upstream from Uwharrie River, and at mile 236.

Drainage area.--4,180 sq mi, approximately.

Records available.--December 1917 to September 1960.

Gage.--Water-stage recorder and staff gage. Datum of gage is 30.9 ft (revised) below mean sea level, datum of 1929.

Remarks.--Badin Lake (locally known as Narrows Reservoir) used for hydroelectric power development, was first put in operation July 12, 1917 (revised). Total capacity is 10,497,960,000 cu ft and usable capacity is 6,202,584,000 cu ft between elevations 505.0 and 541.1 ft (revised). Figures given herein represent total contents. Records not previously published; changes in contents, equivalent in cubic feet per second, for a group of reservoirs including this one have been published since March 1928.

Cooperation.--Records furnished by Yadkin, Inc. (formerly Carolina Aluminum Co.).

Contents, in millions of cubic feet, on last day of month												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1917	-	-	-	-	-	-	-	-	-	-	-	-
1918	-	-	6,540	9,961	8,927	9,260	9,954	9,897	8,685	8,575	10,288	10,012
1919	10,524	10,430	10,442	10,394	10,254	10,024	10,406	10,453	10,453	10,453	10,173	8,916
1920	9,282	9,114	10,300	10,500	10,500	10,500	10,488	10,442	10,395	10,000	10,524	10,512
1921	8,859	10,524	10,500	10,512	10,500	10,512	10,500	10,512	10,418	10,035	8,411	8,067
1922	7,064	10,300	9,462	10,488	10,524	10,476	10,524	10,524	10,524	10,382	10,104	8,250
1923	7,790	5,056	6,217	8,685	9,418	10,382	10,196	10,453	7,510	6,274	9,114	8,751
1924	4,927	4,420	7,906	9,748	10,162	10,070	10,336	10,406	9,702	10,196	9,770	10,536
1925	8,938	6,000	9,805	10,219	9,530	8,444	5,700	6,898	5,359	5,172	4,847	5,763
1926	6,502	7,906	6,179	9,770	10,524	8,379	7,690	5,551	5,790	10,464	9,282	6,713
1927	5,508	8,358	10,512	6,530	10,512	9,759	7,540	6,782	9,552	10,092	10,418	8,520
1928	9,305	5,817	8,729	9,181	9,748	9,805	10,464	10,476	10,394	10,196	10,442	10,453
1929	10,524	10,488	10,230	10,242	10,302	10,476	10,442	10,418	10,453	10,336	10,286	10,370
1930	10,348	10,512	10,524	10,524	10,286	10,310	10,267	10,219	10,208	8,817	6,629	4,670
1931	4,157	6,150	8,529	9,964	9,987	10,030	10,488	10,524	9,996	10,067	10,524	10,056
1932	10,083	8,383	9,950	10,512	10,138	10,276	10,324	9,862	10,247	10,106	10,270	10,042
1933	10,377	10,446	10,382	10,425	10,430	10,120	10,129	10,288	10,219	9,837	9,987	10,162
1934	7,919	6,422	4,959	5,161	5,173	10,418	10,462	10,460	10,411	10,519	10,476	10,495
1935	9,911	9,768	10,461	10,476	10,505	10,364	10,413	10,329	10,040	9,959	9,954	9,856
1936	9,365	9,242	6,762	10,354	10,366	10,359	10,502	10,012	9,789	10,143	9,860	10,010
1937	10,111	9,904	9,794	10,317	10,359	10,359	10,444	10,134	10,189	10,171	10,010	10,037
1938	10,423	9,890	9,973	9,911	9,888	9,968	9,908	9,722	9,879	10,522	10,125	10,221
1939	7,970	9,810	9,968	9,902	10,453	10,515	10,251	10,155	10,173	10,138	10,180	8,232
1940	7,234	6,082	6,293	6,255	7,644	8,465	8,398	8,564	8,883	8,764	10,228	8,685
1941	8,597	8,687	8,540	9,033	8,678	9,431	9,936	9,619	5,984	10,155	9,927	10,049
1942	8,192	8,850	7,898	7,922	10,141	10,097	10,081	10,314	10,030	9,991	10,058	11,136
1943	9,881	7,710	10,302	10,519	10,331	10,491	10,319	10,274	10,063	10,120	10,023	10,182
1944	10,072	10,099	9,929	10,017	10,524	10,512	10,502	10,210	9,927	9,860	10,060	10,270
1945	10,256	10,267	10,242	10,208	10,519	10,136	9,879	10,095	10,097	10,005	10,290	10,442
1946	10,145	10,127	10,500	10,270	10,104	10,359	10,490	10,354	10,371	10,019	9,876	9,869
1947	8,905	9,305	7,360	10,359	10,058	10,127	9,989	9,966	9,759	10,127	9,989	9,950
1948	10,514	10,437	10,203	10,307	10,435	10,469	10,561	10,240	10,065	10,074	10,113	10,083
1949	10,058	10,382	10,476	10,359	10,512	10,406	10,336	10,288	10,382	10,173	10,476	10,196
1950	10,406	10,500	10,173	10,104	10,150	10,336	9,920	10,524	10,265	9,961	10,012	10,219
1951	9,621	8,314	10,196	9,989	10,453	10,104	10,430	9,372	10,242	9,966	9,920	9,350
1952	8,949	10,173	10,312	10,035	9,440	10,476	10,524	10,035	9,395	9,619	10,242	9,989
1953	8,722	7,538	10,081	10,035	10,312	10,382	9,621	9,759	9,816	9,667	9,305	9,897
1954	9,598	9,328	9,805	10,382	10,012	10,453	10,453	10,336	9,943	9,966	8,707	8,937
1955	10,581	10,264	10,054	9,914	10,031	10,007	10,264	10,054	9,574	10,124	10,170	9,799
1956	10,007	8,835	6,612	6,050	10,194	10,194	10,287	9,891	9,844	10,054	9,137	10,124
1957	9,914	10,147	10,147	9,029	10,427	10,241	10,257	10,007	10,474	10,241	10,241	10,287
1958	10,241	10,474	10,334	10,474	10,427	10,404	10,498	10,474	10,194	10,077	10,194	10,007
1959	9,008	7,825	7,245	10,381	10,171	10,311	10,287	10,194	10,031	10,381	10,241	10,194
1960	10,311	10,101	10,287	10,381	10,474	10,474	10,498	10,451	9,937	10,077	9,867	10,217

a Contents by capacity table used beginning Sept. 1, 1954; contents Sept. 30, 1954, by capacity table used prior to Sept. 1, 1954, was 9,966 million cubic feet.

1235. Uwharrie River near Eldorado, N. C.

Location.--Lat 35°25'47" (revised), long 80°01'05" (revised), on right bank 300 ft downstream from State Highway 109, 1 mile upstream from McLeans Creek, and 3 miles south of Eldorado, Montgomery County.

Drainage area.--347 sq mi.

Records available.--October 1938 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is 303.66 ft above mean sea level, datum of 1929, unadjusted.

Average discharge.--22 years (1938-60), 330 cfs.

Extremes.--1938-60: Maximum discharge, 23,300 cfs Sept. 18, 1945 (gage height, 26.22 ft, from floodmark), from rating curve extended above 13,000 cfs by logarithmic plotting; minimum, 0.5 cfs Sept. 21, Oct. 13, 14, 1941; minimum daily, 0.5 cfs Oct. 13, 1941. Flood in August 1928 reached a stage of 22.2 ft, from floodmark established by local resident (discharge, 17,900 cfs).

Remarks.--Marked diurnal fluctuation and some regulation for short periods at low flow caused by gristmill above station. Town of Asheboro diverted an average of 1.3 cfs during period 1950-60 from basin above station for water supply. Sewage is discharged into Deep River (Cape Fear River basin).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	89.2	71.1	196	138	196	318	555	116	195	130	40.7	39.8	173
1952	10.5	31.8	422	446	618	1,698	362	315	139	49.4	352	409	405
1953	56.3	145	260	823	1,161	774	412	183	234	99.5	65.2	58.2	351
1954	21.1	23.6	184	1,082	206	519	388	167	54.2	19.0	36.5	8.31	227
1955	518	79.3	481	217	764	349	454	276	69.6	91.6	474	197	329
1956	396	108	74.7	77.3	753	587	344	331	66.7	73.9	32.6	286	259
1957	103	89.8	302	141	878	525	487	104	199	108	32.3	47.5	247
1958	69.2	638	351	795	638	347	1,201	824	134	236	98.8	27.6	445
1959	28.0	36.1	242	316	523	335	904	135	265	246	218	289	292
1960	814	336	390	691	1,917	1,116	937	253	208	117	483	68.5	606

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.30	0.23	0.65	0.46	0.59	1.06	1.78	0.39	0.63	0.43	0.14	0.13	6.79
1952	0.30	.10	1.40	1.48	1.92	5.64	1.16	1.05	.45	.16	1.17	1.31	15.87
1953	.19	.47	.86	2.74	3.48	2.57	1.32	.61	.75	.33	.22	.19	13.73
1954	.07	.08	.61	3.59	.62	1.72	1.25	.56	.17	.06	.12	.03	8.88
1955	1.72	.28	1.60	.72	2.29	1.16	1.46	.92	.22	.30	1.58	.63	12.86
1956	1.32	.35	.25	.26	2.34	1.95	1.11	1.10	.21	.25	.11	.92	10.17
1957	.34	.29	1.00	.47	2.63	1.74	1.57	.35	.64	.36	.11	.15	9.65
1958	.23	2.05	1.16	2.64	1.92	1.15	3.86	2.74	.43	.79	.33	.09	17.39
1959	.09	.12	.80	1.05	1.57	1.11	2.91	.45	.85	.82	.72	.93	11.42
1960	2.71	1.08	1.30	2.30	5.96	3.71	3.01	.84	.67	.39	1.61	.22	23.80

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	224	8.75
1951	1203	3,480	Apr. 3, 1951	6.6	173	0.499	6.79	182	7.14
1952	1233	16,100	Mar. 4, 1952	2.6	405	1.17	15.87	404	15.86
1953	1273	6,020	Feb. 15, 1953	8.8	351	1.01	13.73	331	12.37
1954	1333	7,610	Jan. 22, 1954	1.1	227	.654	8.88	299	11.70
1955	1383	10,600	Oct. 16, 1954	.9	329	.948	12.86	286	11.20
1956	1433	7,480	Mar. 16, 1956	3.1	259	.746	10.17	252	9.88
1957	1503	6,560	Feb. 2, 1957	7.0	247	.712	9.65	293	11.46
1958	1553	9,000	Jan. 25, 1958	11	445	1.28	17.39	382	14.96
1959	1623	6,200	Apr. 20, 1959	15	292	.841	11.42	396	15.50
1960	1703	10,600	Aug. 24, 1960	21	606	1.75	23.80	-	-

a Maximum daily discharge.

1237.36, Lake Tillery near Norwood, N. C.

Location.--Lat 35°12'24", long 80°03'57", at dam on Pee Dee River, 700 ft upstream from Norfolk Southern Railway bridge, 3½ miles southeast of Norwood, Stanly County, 5 miles upstream from Rocky River, and at mile 218.

Drainage area.--4,600 sq mi, approximately.

Records available.--February 1928 to September 1960.

Gage.--Water-stage recorder and float-tape gage. Datum of gage is 38.67 ft (revised) above mean sea level, datum of 1929 (levels by Carolina Power and Light Co.).

Remarks.--Lake used for hydroelectric power development was first put in operation during January 1928. Total capacity is 7,274,520,000 cu ft and usable capacity is 5,927,040,000 cu ft (revised) between elevations 200.5 and 239.5 ft (top of gates). Figures given herein represent usable contents. Records not previously published; changes in contents, equivalent in cubic feet per second, for a group of reservoirs including this one have been published since March 1928.

Cooperation.--Records furnished by Carolina Power and Light Co.

Contents, in millions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	-	-	3,824	5,622	5,925	5,815	5,600	5,492	5,859	5,859
1929	5,514	5,538	5,578	5,564	5,947	5,903	5,903	5,815	5,859	5,450	5,772	5,708
1930	5,175	5,815	5,881	5,664	5,492	4,890	5,556	4,550	5,903	4,890	5,114	4,950
1931	5,729	5,643	5,217	4,930	4,870	5,385	5,259	5,154	5,492	5,196	5,217	5,664
1932	5,072	5,322	5,492	5,859	5,815	5,794	5,772	5,492	5,343	5,175	5,729	5,406
1933	5,322	5,643	5,622	5,794	5,750	5,815	5,364	4,990	5,072	5,343	5,114	5,622
1934	5,557	5,134	5,134	4,550	3,180	5,772	4,492	5,471	5,259	5,364	5,600	5,881
1935	5,991	5,280	4,790	4,472	4,434	5,925	5,114	4,356	5,772	5,622	5,093	5,881
1936	5,600	5,154	4,690	4,790	5,175	5,750	5,322	5,881	5,643	5,643	5,772	5,729
1937	5,794	5,664	5,343	5,815	5,708	5,600	4,710	5,471	5,708	5,729	5,708	5,750
1938	5,622	5,557	5,196	5,622	5,600	5,322	5,708	5,600	5,750	5,364	5,600	5,093
1939	5,794	4,990	5,643	5,837	5,947	5,154	5,364	5,259	5,643	5,837	5,578	5,557
1940	5,686	5,600	5,600	5,643	4,414	5,514	4,950	5,450	5,622	5,385	5,708	5,686
1941	5,643	5,536	5,175	5,557	5,881	5,471	5,686	5,859	5,837	5,600	5,750	5,708
1942	5,428	5,881	5,385	5,492	5,322	5,881	5,406	5,708	5,622	5,259	5,837	5,772
1943	5,708	5,643	4,950	5,772	5,664	5,514	5,406	5,925	5,557	5,536	5,536	5,406
1944	5,772	5,664	5,564	5,751	5,383	5,991	5,772	5,664	5,815	5,815	5,093	5,450
1945	5,643	5,859	5,578	4,910	5,492	5,154	5,729	5,664	5,859	5,729	5,385	5,750
1946	5,729	5,406	5,947	5,815	5,622	5,772	5,859	5,837	5,859	5,837	5,794	5,815
1947	5,794	5,729	5,815	5,536	5,664	5,815	5,664	5,881	5,815	5,772	5,837	5,794
1948	5,772	5,794	5,903	5,903	5,280	5,280	5,514	5,925	5,881	5,750	5,622	5,471
1949	5,859	5,925	5,969	5,471	5,536	5,751	5,664	5,793	5,772	5,837	5,947	5,664
1950	5,991	5,815	5,838	5,838	5,838	5,708	5,925	5,903	5,859	5,881	5,838	5,903
1951	5,881	5,903	5,794	5,881	5,794	5,643	5,815	5,903	5,815	5,837	5,837	5,859
1952	5,903	5,837	5,794	5,837	5,794	5,729	5,772	5,881	5,859	5,815	5,969	5,837
1953	5,859	5,881	5,903	5,708	5,622	5,794	5,794	5,881	5,815	5,881	5,903	5,881
1954	5,815	5,881	5,859	5,600	5,837	5,750	5,729	5,881	5,772	5,815	5,837	5,859
1955	5,859	5,815	5,815	5,859	5,815	5,815	5,793	5,859	5,859	5,859	5,859	5,708
1956	5,881	5,881	5,815	5,859	5,859	5,837	5,859	5,859	5,903	5,881	5,881	5,881
1957	5,859	5,859	5,837	5,837	5,925	5,837	5,837	5,859	5,859	5,881	5,903	5,664
1958	5,837	5,794	5,622	5,837	5,947	5,772	5,991	5,514	5,881	5,903	5,881	5,881
1959	5,837	5,859	5,881	5,196	5,750	5,815	5,815	5,859	5,815	5,859	5,881	5,093
1960	5,343	5,622	5,492	5,925	4,650	5,947	5,217	5,536	5,686	5,794	5,837	5,859

1250. Big Bear Creek near Richfield, N. C.

Location.--Lat 35°20'05", long 80°20'10", 200 ft upstream from highway bridge, 300 ft downstream from Little Creek, and 10 miles southwest of Richfield, Stanly County.

Drainage area.--55.7 sq mi.

Records available.--May 1954 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 426.62 ft above mean sea level, unadjusted.

Average discharge.--6 years (1954-60), 61.1 cfs.

Extremes.--1954-60: Maximum discharge, 9,700 cfs July 9, 1959 (gage height, 14.55 ft), from rating curve extended above 2,700 cfs on basis of computation of peak flow over dam 1 mile downstream; no flow Sept. 12 to Oct. 14, 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	37.4	10.9	86.0	44.8	146	57.2	99.9	33.6	33.7	20.4	3.57	0.13	49.1
									2.39	62.1	11.1	5.48	
1956	80.5	14.9	6.23	7.41	155	106	46.3	41.9	4.68	35.1	14.1	52.4	46.7
1957	22.5	7.07	51.1	21.7	164	73.5	102	8.34	140	4.05	1.34	7.16	49.1
1958	6.10	179	59.6	91.3	90.4	62.4	247	66.7	13.6	20.0	5.45	.227	69.6
1959	.511	.63	34.6	50.2	105	71.4	127	11.4	42.8	195	91.6	79.7	67.2
1960	129	48.3	63.5	168	273	162	108	30.9	9.49	16.7	10.7	2.52	84.7

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	0.77	0.22	1.78	0.93	2.72	1.18	2.00	0.70	0.67	0.42	0.07	0.003	-
									.05	1.29	.23	.11	11.98
1956	1.67	.30	.13	.15	3.01	2.20	.93	.87	.09	.73	.29	1.05	11.42
1957	.46	.14	1.06	.45	3.07	1.52	2.04	.17	2.80	.08	.03	.14	11.96
1958	.13	3.59	1.23	1.89	1.69	1.29	4.85	1.38	.27	.41	.11	.005	18.94
1959	.01	.01	.72	1.04	1.96	1.48	2.54	.24	.86	4.03	1.90	1.60	16.39
1960	2.67	.97	1.32	3.48	5.29	3.36	2.17	.64	.19	.35	.22	.05	20.71

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-
1954	1383	a2,200	June 16, July 16	0	-	-	-	-	-
1955	1383, 1503	4,880	Feb. 6, 1955	0	49.1	0.882	11.98	46.4	11.31
1956	1433	4,200	Mar. 16, 1956	.3	46.7	.838	11.42	44.9	10.98
1957	1503	7,460	June 8, 1957	.1	49.1	.882	11.96	52.6	15.25
1958	1553	4,880	Apr. 6, 1958	.1	69.6	1.25	16.94	52.3	12.74
1959	1823	9,700	July 9, 1959	.1	67.2	1.21	16.39	84.5	20.61
1960	1703	4,550	Feb. 18, 1960	.5	84.7	1.52	20.71	-	-

a Maximum during period May 27 to Sept. 30.

1260. Rocky River near Norwood, N. C.

Location (revised).--Lat 35°09', long 80°10', on left bank 1,000 ft downstream from Lanes Creek, $1\frac{1}{2}$ miles upstream from highway bridge, and 6 miles southwest of Norwood, Stanly County.

Drainage area.--1,370 sq mi, approximately.

Records available.--October 1929 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 212.91 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--31 years (1929-60), 1,280 cfs.

Extremes.--1929-60: Maximum discharge, 105,000 cfs Sept. 18, 1945 (gage height, 46.37 ft, from floodmark), from rating curve extended above 70,000 cfs by logarithmic plotting; minimum, 17 cfs Oct. 8, 1954 (gage height, 0.00 ft). Flood in August 1903 reached a stage of 35 ft, from information by local residents (discharge, 67,600 cfs).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	117	121	303	254	411	1,156	1,646	150	223	319	349	353	449
1952	56.1	130	1,719	1,361	2,978	6,431	876	304	264	142	2,015	2,179	1,537
1953	156	165	557	2,016	4,239	3,309	923	814	226	275	833	1,125	1,202
1954	125	99.0	1,412	5,253	833	2,314	1,887	353	422	1,030	150	41.0	1,169
1955	755	182	1,464	1,105	3,175	1,121	2,757	565	145	865	755	198	1,076
1956	937	267	176	214	3,014	2,759	1,297	1,309	157	436	223	1,001	975
1957	327	212	786	444	2,581	2,029	1,440	469	1,450	143	82.4	177	831
1958	195	3,275	1,346	2,841	2,107	1,662	4,817	1,701	288	735	333	96.3	1,607
1959	128	119	720	1,115	2,282	1,544	3,048	434	850	3,262	2,374	1,804	1,467
1960	3,756	1,133	1,448	3,750	7,922	4,454	3,134	1,061	596	334	647	214	2,352

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.10	0.10	0.25	0.21	0.31	0.97	1.34	0.13	0.18	0.27	0.29	0.29	4.44
1952	.05	.11	1.45	1.15	2.34	5.41	.71	.26	.22	.12	1.70	1.77	15.29
1953	.13	.13	.47	1.70	3.22	2.78	.75	.68	.18	.23	.70	.92	11.89
1954	.10	.08	1.19	4.42	.63	1.95	1.54	.30	.34	.87	.13	.03	11.58
1955	.64	.15	1.23	.93	2.41	.94	2.25	.48	.12	.73	.63	.16	10.67
1956	.79	.22	.15	.18	2.37	2.32	1.06	1.10	.13	.37	.19	.82	9.70
1957	.28	.17	.66	.37	1.96	1.71	1.17	.39	1.18	.12	.07	.14	8.22
1958	.16	2.67	1.13	2.39	1.80	1.40	3.92	1.43	.23	.62	.28	.08	15.91
1959	.11	.10	.61	.94	1.73	1.30	2.48	.37	.69	2.74	2.00	1.47	14.54
1960	3.16	.92	1.22	3.16	6.24	3.75	2.55	.89	.49	.28	.54	.17	23.37

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	561	5.55
1951	1203	14,000	Apr. 8, 1951	26	449	0.328	4.44	565	5.60
1952	1233	63,400	Aug. 31, 1952	33	1,537	1.12	15.29	1,450	14.41
1953	1273	29,400	Feb. 15, 1953	55	1,202	.877	11.89	1,266	12.53
1954	1333	41,000	Jan. 23, 1954	26	1,169	.853	11.58	1,233	12.23
1955	1383	36,500	Feb. 7, 1955	19	1,076	.785	10.67	989	9.81
1956	1433	37,100	Mar. 16, 1956	44	975	.712	9.70	970	9.65
1957	1503	23,600	Apr. 5, 1957	34	831	.607	8.22	1,119	11.07
1958	1553	31,900	Jan. 25, 1958	67	1,607	1.17	15.91	1,289	12.77
1959	1623	35,500	July 10, 1959	65	1,467	1.07	14.54	1,920	19.02
1960	1703	41,200	Jan. 31, 1960	91	2,352	1.72	23.37	-	-

1270. Brown Creek near Polkton, N. C.

Location (revised).--Lat 35°02', long 80°09', on left bank 100 ft downstream from site of Medley's mill, 400 ft downstream from bridge on State Highway 742, 3½ miles downstream from Little Brown Creek, and 4 miles northeast of Polkton, Anson County.

Drainage area.--110 sq mi.

Records available.--October 1937 to September 1960.

Gage.--Water-stage recorder and sharp-crested weir. Altitude of gage is 216 ft (by barometer).

Average discharge.--23 years (1937-60), 83.9 cfs.

Extremes.--1937-60: Maximum discharge, 17,300 cfs Sept. 18, 1945 (gage height, 17.68 ft, from floodmark), from rating curve extended above 3,000 cfs by logarithmic plotting; no flow for several days of most years.
Flood in August 1908 reached a stage of 17.4 ft, revised (discharge, 16,100 cfs); July 1916, 16.7 ft, revised (discharge, 13,600 cfs); September 1928, about 16 ft, revised (discharge, 11,300 cfs), from floodmarks witnessed by local residents.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.169	0.039	9.03	8.98	17.8	90.4	144	3.31	0.617	5.21	19.0	1.67	25.0
1952	.207	.136	25.7	40.5	237	459	73.9	52.8	54.0	10.1	190	273	118
1953	1.71	2.27	22.3	158	317	308	96.0	65.2	.951	22.0	26.1	21.4	85.4
1954	1.59	.064	62.4	394	120	103	221	15.3	.514	3.81	.315	0	76.9
1955	10.5	.074	31.7	100	123	42.9	287	7.36	.450	28.3	27.5	38.6	57.3
1956	23.1	6.95	5.12	6.64	215	221	104	129	12.0	.059	1.98	18.1	61.3
1957	2.94	.763	14.4	17.4	83.2	177	37.6	85.1	99.5	1.52	.751	.486	43.1
1958	.535	218	104	320	166	235	184	136	15.9	14.7	2.04	.087	118
1959	22.0	.308	32.7	66.2	237	134	451	20.5	12.9	79.7	17.4	47.6	91.8
1960	207	54.3	71.9	278	645	290	273	27.0	4.13	8.48	11.8	2.08	154

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.002	0.0004	0.09	0.09	0.17	0.95	1.46	0.03	0.006	0.05	0.20	0.02	3.07
1952	.002	.001	.27	.42	2.33	4.81	.75	.55	.55	.11	1.99	2.76	14.54
1953	.02	.02	.23	1.65	3.00	3.23	.97	.68	.01	.23	.27	.22	10.53
1954	.02	.0006	.65	4.13	1.14	1.08	2.24	.16	.005	.04	.003	0	9.47
1955	.11	.0007	.33	1.05	1.17	.45	2.91	.08	.005	.30	.29	.39	7.09
1956	.24	.07	.05	.07	2.11	2.31	1.05	1.35	.12	.0006	.02	.18	7.57
1957	.03	.008	.15	.18	.79	1.85	.38	.89	1.01	.02	.008	.005	5.32
1958	.004	2.21	1.09	3.36	1.57	2.44	1.86	1.74	.16	.15	.02	.0007	14.60
1959	.23	.003	.34	.69	2.24	1.40	4.57	.22	.13	.84	.18	.48	11.32
1960	2.17	.55	.75	2.91	6.33	3.04	2.77	.28	.04	.09	.12	.02	19.07

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	23.5	2.89
1951	1203	995	Aug. 3, 1951	0	25.0	0.227	3.07	26.4	3.25
1952	1233	7,000	Aug. 31, 1952	0	118	1.07	14.54	118	14.54
1953	1273	1,640	Feb. 15, 1953	.04	85.4	.776	10.53	88.6	10.93
1954	1333	2,040	Jan. 23, 1954	0	76.9	.699	9.47	75.0	9.24
1955	1383	2,240	Apr. 15, 1955	0	57.3	.521	7.09	56.7	7.01
1956	1433	1,720	Mar. 17, 1956	0	61.3	.557	7.57	60.0	7.40
1957	1503	1,050	June 10, 1957	0	43.1	.392	5.32	68.3	8.44
1958	1553	2,220	Jan. 26, 1958	0	118	1.07	14.60	96.3	11.87
1959	1623	4,220	Apr. 13, 1959	0	91.8	.835	11.32	115	14.22
1960	1703	2,220	Feb. 14, 1960	.01	154	1.40	19.07	-	-

1280. Little River near Star, N. C.

Location.--Lat 35°23'11", long 79°49'56", on left bank 12 ft downstream from highway bridge, a quarter of a mile upstream from Norfolk Southern Railway bridge, 0.3 mile downstream from West Fork Little River, and 3 miles west of Star, Montgomery County.

Drainage area.--105 sq mi.

Records available.--April 1954 to September 1960. Occasional low-flow measurements, 1949-54.

Gage.--Water-stage recorder. Datum of gage is 409.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--6 years (1954-60), 120 cfs.

Extremes.--1954-60: Maximum discharge, 10,400 cfs Oct. 15, 1954 (gage height, 16.46 ft), from rating curve extended above 6,500 cfs by logarithmic plotting; minimum, 0.3 cfs Oct. 6, 9-14, 1954.

Flood in September 1945 reached a stage of about 20 ft, from information by local resident.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	243	27.4	99.5	64.9	265	128	148	82.1	35.1	13.9	15.7	2.58	
								58.7	33.1	104	120	176	121
1956	154	57.1	39.9	41.5	209	204	118	80.8	37.9	59.4	28.5	91.1	93.0
1957	71.4	33.6	126	63.2	253	158	94.6	49.5	93.1	31.7	29.2	24.0	84.4
1958	29.8	258	103	242	205	132	430	203	49.3	82.0	21.8	8.03	146
1959	17.4	17.7	*83.3	85.5	166	117	339	64.2	65.3	79.8	79.0	104	101
1960	177	105	113	269	467	385	338	105	95.1	37.8	23.9	11.8	176

* Corrected.

* Not previously published; estimated on basis of records for Uwharrie River near Eldorado.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	2.67	0.29	1.09	0.71	2.63	1.40	1.57	1.64	0.37	0.15	0.17	0.03	
									.35	1.14	1.32	1.87	15.68
1956	1.69	.61	.44	.46	2.14	2.24	1.25	.89	.40	.65	.31	.97	12.05
1957	.78	.36	1.38	.69	2.51	1.73	1.01	.54	.99	.35	.32	.26	10.92
1958	.33	2.74	1.13	2.66	2.04	1.45	4.56	2.23	.52	.90	.24	.09	18.89
1959	.19	.19	.91	.94	1.65	1.29	3.60	1.71	.69	.88	.87	1.10	13.02
1960	1.94	1.11	1.24	2.96	4.80	4.22	3.59	1.15	1.01	.42	.26	.13	22.83

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-
1954	1333	-	-	-	-	-	-	-	-
1955	1383	10,400	Oct. 15, 1954	20.6	.3	121	1.15	15.68	111
									14.37
1956	1433	4,600	Mar. 16, 1956	4.6	93.0	.886	12.05	91.3	11.83
1957	1503	2,650	Feb. 28, 1957	4.6	84.4	.804	10.92	97.4	12.60
1958	1553	4,440	Apr. 28, 1958	4.4	146	1.39	18.89	124	15.98
1959	1623	3,640	Apr. 19, 1959	6.6	101	.962	13.02	124	16.02
1960	1703	4,840	Jan. 31, 1960	4.6	176	1.68	22.83	-	-

a Minimum daily during period Apr. 28 to Sept. 30.

1288. Blewett Falls Lake near Rockingham, N. C.

Location.--Lat 35°58'58", long 79°52'41", at dam on Pee Dee River $1\frac{1}{2}$ miles upstream from Cartledge Creek, $6\frac{1}{2}$ miles northwest of Rockingham, Richmond County, and at mile 191.

Drainage area.--6,830 sq mi, approximately.

Records available.--October 1927 to December 1928 monthly changes in contents, published in WSP 1303. December 1929 to September 1960.

Gage.--Dial indicator and staff gage. Datum of gage is 39.08 ft (revised) above mean sea level, datum of 1929 (levels by Carolina Power and Light Co.).

Remarks.--Lake used for hydroelectric power development was first put in use during 1911. Total capacity is 4,225,320,000 cu ft and usable capacity is 1,850,000,000 cu ft between elevations 120.0 and 139.0 ft (top of 4-foot flashboards). Figures given here-in represent usable contents. Records not previously published; changes in contents, equivalent in cubic feet per second, have been published either for this reservoir or a group of reservoirs including this one.

Cooperation.--Records furnished by Carolina Power and Light Co.

Contents, in millions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930	-	-	1,480	1,290	970	1,320	1,380	970	1,560	1,540	1,100	1,090
1931	1,480	1,200	1,910	1,210	1,090	1,440	1,280	1,330	1,470	1,530	1,410	1,600
1932	1,520	1,390	1,510	1,530	1,829	1,400	1,170	1,260	1,340	1,230	1,480	1,540
1933	1,340	1,240	1,860	1,340	1,360	1,120	1,240	1,290	1,440	1,490	1,510	1,500
1934	1,550	1,540	1,350	1,420	1,090	1,714	1,330	1,550	1,180	1,060	1,150	1,320
1935	1,300	1,850	1,510	1,540	1,400	1,703	1,420	1,160	1,420	1,330	1,380	1,290
1936	1,400	1,330	1,380	1,420	1,200	1,630	1,350	1,350	1,350	1,650	1,320	1,260
1937	1,160	1,230	1,550	1,829	1,380	1,270	1,692	1,430	1,480	1,460	1,808	1,470
1938	1,230	1,400	1,410	1,320	1,340	1,570	1,620	1,650	1,570	1,350	1,640	1,630
1939	1,590	1,714	1,640	1,808	2,030	1,620	1,390	1,714	1,520	1,661	1,672	1,682
1940	1,724	1,682	1,661	1,380	1,450	1,130	1,400	1,672	1,734	1,766	1,787	1,640
1941	1,734	1,630	1,860	1,350	1,420	1,714	1,776	1,692	1,703	1,530	1,745	1,520
1942	1,650	1,682	1,490	1,510	1,692	1,787	1,776	1,350	1,380	1,745	1,703	1,703
1943	1,650	1,500	1,950	1,892	1,290	1,150	1,756	1,650	1,650	1,340	1,756	1,610
1944	1,640	1,745	1,766	1,661	1,940	1,880	1,200	1,230	1,550	1,370	1,610	2,060
1945	1,160	1,940	1,510	1,360	1,818	1,630	1,500	1,640	1,530	1,600	1,620	1,500
1946	1,500	1,200	1,920	1,270	1,150	1,300	2,080	1,808	1,745	1,714	1,630	1,703
1947	1,692	1,570	1,630	1,370	1,620	1,703	1,692	1,672	1,703	1,755	1,787	1,480
1948	1,787	1,714	1,703	1,960	1,440	1,610	1,692	1,930	1,724	1,766	1,661	1,703
1949	1,818	2,070	2,080	1,400	1,714	1,640	2,010	1,850	1,672	1,776	1,910	1,703
1950	2,130	1,745	1,766	1,756	1,776	1,440	1,734	1,900	1,734	1,661	1,640	1,798
1951	1,682	1,798	1,840	1,745	1,766	1,734	1,692	1,808	1,756	1,818	1,650	1,818
1952	1,787	1,734	1,460	1,600	1,980	1,430	1,910	1,703	1,610	1,766	2,120	1,766
1953	1,798	1,808	2,050	1,745	1,510	1,480	1,745	1,766	1,734	1,776	1,756	1,560
1954	1,756	1,798	1,734	1,460	1,734	2,040	1,776	1,756	1,776	1,714	1,808	1,714
1955	1,818	1,787	1,672	1,724	1,766	1,745	1,692	1,745	1,776	1,766	1,724	1,714
1956	1,756	1,734	1,787	1,714	1,890	1,672	1,661	1,766	1,776	1,776	1,734	1,682
1957	1,703	1,703	1,570	1,787	2,130	1,692	1,250	1,682	1,672	1,734	1,672	1,620
1958	1,640	1,950	1,610	1,480	2,120	1,990	2,200	1,550	1,640	1,766	1,661	1,703
1959	1,766	1,766	1,630	1,570	1,390	1,910	1,650	1,682	1,734	2,100	1,798	2,200
1960	1,808	1,682	1,756	2,327	1,703	2,150	1,620	1,766	1,724	1,590	1,661	1,580

1290. Pee Dee River near Rockingham, N. C.

Location.--Lat 34°56'46" (revised), long 79°52'11" (revised), on left bank at bridge on U.S. Highway 74, 2.5 miles upstream from Falling Creek, 3.3 miles downstream from Blewett Falls hydroelectric plant, 6 miles west of Rockingham, Richmond County, and at mile 187.

Drainage area.--6,870 sq mi, approximately.

Records available.--August 1906 to January 1912, October 1927 to September 1960. Published as "Yadkin River near Pee Dee, N. C." August 1906 to January 1912. Daily discharges for Sept. 27-30, 1927, published in water-supply paper 662 are in error and should not be used.

Gage.--Water-stage recorder. Datum of gage is 120.68 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). August 1906 to January 1912 staff gage at site 3.3 miles (revised) upstream at different datum. September 1927 to Sept. 30, 1931, water-stage recorder at present site at datum 1.00 ft higher.

Average discharge.--38 years (1906-11, 1927-60), 7,878 cfs (unadjusted).

Extremes.--1927-60: Maximum discharge, 276,000 cfs Aug. 27, 1908 (gage height, 31.28 ft, present site and datum, from records of State Highway Commission), from rating curve extended above 194,000 cfs; minimum, 50 cfs Dec. 2, 3, 1951; minimum daily, 58 cfs Dec. 2, 1951, result of abnormally low shutdown of Blewett Falls hydroelectric plant to produce steady flow for current-meter measurements at this gaging station. Minimum discharge from normal regulations, 96 cfs Oct. 25, 1943; minimum daily, 142 cfs Sept. 16, 1956.

Remarks.--Large diurnal fluctuation caused by powerplants above station. Flow largely regulated since 1928 by four reservoirs above station which have a combined usable capacity for normal operation of 24,209,624,000 cu ft (corrected). Records of chemical analyses and water temperatures for the period October 1957 to September 1960, are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4,151	3,961	4,067	4,604	5,940	7,481	10,780	4,676	3,513	3,284	3,420	1,885	4,802
1952	1,803	2,059	8,266	8,459	12,580	27,670	8,466	7,174	4,149	2,352	6,592	9,212	8,233
1953	2,650	2,907	3,522	10,760	18,200	17,650	7,994	4,718	4,317	3,354	2,674	3,182	6,758
1954	1,295	1,807	6,327	18,900	6,595	10,940	9,836	4,043	3,108	3,497	1,456	1,008	5,739
1955	4,169	3,360	6,628	5,623	10,870	7,194	10,790	5,010	3,637	3,857	4,647	2,428	5,647
1956	4,042	3,160	3,159	2,475	8,353	9,265	6,561	6,651	2,876	3,232	2,735	3,751	4,675
1957	3,631	3,969	5,353	5,853	10,370	10,960	11,640	5,138	8,019	3,730	3,175	5,062	6,369
1958	5,504	16,120	10,510	12,960	11,350	11,000	22,990	15,630	5,577	5,711	4,846	4,113	10,500
1959	3,343	2,894	4,443	5,900	10,290	8,040	14,490	5,458	5,002	7,290	8,044	9,216	6,998
1960	18,350	7,432	8,634	13,290	36,040	19,180	20,480	9,032	6,241	4,420	5,769	5,220	12,750

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year		
		Observed			Adjusted a/			Observed	Adjusted a/	
		Momentary maximum	Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge								
1950	-	-	-	-	-	-	-	5,918	5,925	11.70
1951	1203	39,200	Apr. 9, 1951	218	4,802	4,617	9.52	4,802	4,843	9.57
1952	1233	122,000	Mar. 5, 1952	58	8,233	8,234	1.20	16.33	7,972	7,965
1953	1273	64,100	Feb. 22, 1953	215	6,758	6,780	.987	13.40	6,775	6,704
1954	1333	97,000	Jan. 23, 1954	154	5,739	5,598	.815	11.06	6,152	6,092
1955	1383	59,900	Apr. 15, 1955	374	5,647	5,623	.818	11.10	5,325	5,079
1956	1433	59,000	Mar. 17, 1956	142	4,675	4,851	.706	9.61	4,892	5,166
1957	1503	54,800	Apr. 7, 1957	185	6,369	6,393	.931	12.64	7,965	8,081
1958	1553	74,700	Apr. 30, 1958	584	10,500	10,280	1.50	20.36	8,714	8,600
1959	1623	52,200	July 10, 1959	272	6,998	7,182	1.05	14.25	9,001	9,125
1960	1703	91,000	Feb. 1, 1960	592	12,750	12,630	1.84	25.05	-	-

a Adjusted for change in contents of Blewett Falls, Badin, High Rock, and Tillery Lakes.

1305. Juniper Creek near Cheraw, S. C.

Location.--Lat 34°39', long 79°54', at left end of Eureka Lake Dam, 1½ miles upstream from mouth and 3½ miles south of Cheraw, Chesterfield County.

Drainage area.--64 sq mi, approximately.

Records available.--May 1940 to September 1958.

Gage.--Water-stage recorder and concrete spillway. Altitude of gage is 90 ft (from Corps of Engineers map).

Average discharge.--18 years (1940-58), 72.5 cfs.

Extremes.--1940-58: Maximum discharge, 3,910 cfs Sept. 18, 1945 (gage height, 5.71 ft), from rating curve extended above 810 cfs by logarithmic plotting and computation of peak flow over dam; no flow May 30, 1945, Oct. 10 to Nov. 7, 1956, and part of May 29, 1945, May 7, 1951, and Apr. 7, 8, 1955 (water below spillway crest and gates closed).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	53.5	46.2	86.8	60.4	55.0	50.5	88.1	20.6	15.8	20.7	42.0	64.0	50.2
1952	27.4	43.3	63.7	55.6	76.1	129	74.3	41.9	84.8	18.0	59.9	109	65.0
1953	35.7	62.6	59.4	96.8	120	110	76.5	121	144	113	66.9	73.8	89.8
1954	45.6	45.4	114	136	76.6	55.5	103	56.0	22.2	17.3	7.82	4.63	57.0
1955	40.4	27.2	42.7	66.0	95.7	28.0	58.5	15.9	15.1	15.3	16.4	31.4	37.3
1956	22.2	31.3	27.5	55.4	84.7	49.8	49.8	61.2	11.6	4.63	26.6	84.7	42.2
1957	18.1	21.0	37.7	37.8	39.2	88.8	51.8	71.5	41.3	31.1	32.0	101	47.6
1958	68.5	149	127	139	126	137	140	143	122	214	110	49.2	127
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1950	-	-	-	-	-	-	-	54.8	11.64	-	-
1951	1203	392	Sept. 8, 1951	5.3	50.2	0.784	10.67	45.8	9.73	-	-
1952	1233	778	Sept. 1, 1952	6.2	65.0	1.02	13.83	66.9	14.23	-	-
1953	1273	880	June 9, 1953	17.5	89.8	1.40	19.04	93.8	19.90	-	-
1954	1333	316	Dec. 15, 1953	.8	57.0	.891	12.08	49.0	10.39	-	-
1955	1383	235	Oct. 17, 1954	1.8	37.3	.583	7.92	34.8	7.40	-	-
1956	1433	360	Sept. 15, 1956	2.2	42.2	.659	8.97	41.9	8.90	-	-
1957	1503	318	Sept. 12, 1957	0	47.6	.744	10.11	70.0	14.84	-	-
1958	1553	712	July 22, 1958	39	127	1.98	26.96	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-

1309. Big Black Creek near McBee, S. C.

Location.--Lat 34°30'50", long 80°11'00", near right bank at downstream side of bridge on U.S. Highway 1, 0.2 mile upstream from Little Alligator Creek and 5.3 miles northeast of McBee, Chesterfield County.

Drainage area.--108 sq mi.

Records available.--October 1959 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 224.715 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Dec. 22, 1959, staff gage at same site and datum.

Extremes.--1959-60: Maximum discharge, 804 cfs Apr. 7 (gage height, 9.59 ft); minimum, 88 cfs July 23.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	353	225	191	251	411	318	338	188	134	150	152	142	237

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	3.77	2.32	2.04	2.68	4.11	3.39	3.49	2.01	1.38	1.60	1.63	1.46	29.88

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1960	1703	804	Apr. 7, 1960	91	237	2.19	29.88	-	-	-	-

1310. Pee Dee River at Peedee, S. C.

Location.--Lat 34°12'15", long 79°32'55", in pier of bridge on U.S. Highway 76 at Peedee, Marion County, 0.2 mile downstream from Atlantic Coast Line Railroad bridge, 8½ miles downstream from Black Creek, and at mile 102.8 upstream from Winyah Bay.

Drainage area.--8,830 sq mi, approximately.

Records available.--October 1938 to September 1960. Monthly discharge only for some periods, published in WSP 1303. Prior to October 1947, published as "near Mars Bluff." Gage-height records collected at practically same sites since 1923 are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 24.73 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 1, 1947, at site 1.6 miles downstream at datum 1.27 ft lower.

Average discharge.--22 years (1938-60), 9,049 cfs.

Extremes.--1938-60: Maximum discharge, 220,000 cfs Sept. 22, 1945 (gage height, 33.30 ft, site and datum then in use), from rating curve extended above 48,000 cfs on basis of discharge measurement of 221,000 cfs at Cheraw; minimum, 700 cfs Sept. 29, 1954 (gage height, 0.60 ft, from graph based on gage readings).

Remarks.--Flow regulated by powerplants above station. Combined usable capacity of four largest reservoirs, 24,209,624,000 cu ft (corrected).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4,599	4,631	4,939	5,531	6,528	8,223	12,440	5,540	3,867	3,680	4,120	2,625	5,548
1952	2,117	2,612	7,951	8,145	15,640	28,770	13,070	8,582	5,730	2,898	6,867	12,660	9,405
1953	3,712	4,272	4,410	11,950	17,910	21,910	12,090	6,971	5,540	4,443	3,469	3,303	8,276
1954	2,361	2,241	7,302	17,550	11,640	11,080	13,410	5,737	3,789	3,795	1,981	1,380	6,835
1955	4,270	3,754	7,126	6,696	11,530	8,221	13,510	6,120	4,240	4,469	4,907	3,718	6,509
1956	4,583	3,711	3,791	3,268	9,498	11,180	8,183	8,018	3,390	3,473	3,144	3,649	5,477
1957	4,709	4,430	5,741	6,188	10,520	13,060	13,300	6,763	8,812	4,687	3,720	5,605	7,260
1958	6,310	12,300	20,040	14,410	15,600	15,210	22,370	24,620	8,509	8,582	5,853	4,865	13,220
1959	4,511	3,715	4,894	7,546	13,310	11,010	17,920	7,980	6,202	8,468	9,857	10,170	8,754
1960	24,000	10,750	10,820	16,610	44,410	24,070	29,180	11,180	7,652	6,045	7,751	6,589	16,470

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	6,697	-
1951	1203	21,600	Apr. 14, 1951	958	5,548	-	-	5,426	-
1952	1233	62,600	Mar. 10, 1952	880	9,405	-	-	9,378	-
1953	1273	39,700	Feb. 28, 1953	1,300	8,276	-	-	8,240	-
1954	1333	60,500	Jan. 29, 1954	720	6,835	-	-	7,106	-
1955	1383	32,200	Apr. 21, 1955	826	6,509	-	-	6,249	-
1956	1433	22,000	Mar. 22, 1956	1,260	5,477	-	-	5,712	-
1957	1503	30,000	Apr. 13, 1957	1,700	7,260	-	-	9,257	-
1958	1553	52,600	Dec. 1, 1957	2,800	13,220	-	-	11,070	-
1959	1623	28,800	Apr. 26, 1959	2,210	8,754	-	-	11,490	-
1960	1703	70,400	Apr. 10, 1960	3,450	16,470	-	-	-	-

1315. Lynches River near Bishopville, S. C.

Location.--Lat 34°15', long 80°13', near center of span on downstream side of bridge on U.S. Highway 15, 1 mile upstream from Seaboard Air Line Railroad bridge, 2.9 miles northeast of Bishopville, Lee County, and 3.3 miles downstream from Bells Branch.

Drainage area.--675 sq mi.

Records available.--May 1942 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 161 ft (by barometer). Prior to June 11, 1948, wire-weight gage at site 100 ft upstream at same datum. June 11, 1948, to Dec. 15, 1954, wire-weight gage at present site and datum.

Average discharge.--18 years (1942-60), 723 cfs.

Extremes.--1942-60: Maximum discharge, 29,400 cfs Sept. 19, 1945 (gage height, 22.35 ft, from floodmark); from rating curve extended above 12,000 cfs by velocity-area studies; minimum, 125 cfs Sept. 16, Oct. 8, 1954, Sept. 21, 1956.

Remarks.--Records of chemical analyses and water temperatures for the period October 1957 to September 1958 are published in report of the Geological Survey.

Correction.--In WSP 1303, the momentary maximum discharge for 1948 is listed in error; it should be 7,460 cfs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	320	305	491	479	481	619	915	277	212	338	225	187	403
1952	149	216	464	428	852	2,087	858	587	565	275	520	1,761	728
1953	338	381	410	795	1,344	1,446	692	787	292	331	268	415	621
1954	379	338	1,139	1,424	685	688	1,213	440	226	335	182	146	600
1955	254	269	390	623	743	473	1,151	266	239	511	314	264	456
1956	259	314	291	354	928	1,040	800	711	260	212	206	243	465
1957	307	283	385	392	455	998	595	842	402	188	181	239	439
1958	275	1,402	1,063	1,344	1,039	1,588	1,435	1,375	664	867	430	271	979
1959	401	342	470	938	1,432	1,289	1,536	524	420	810	508	629	770
1960	1,803	903	874	1,443	2,738	1,685	2,199	705	478	549	567	564	1,202

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.55	0.50	0.84	0.82	0.74	1.06	1.52	0.47	0.35	0.58	0.38	0.31	8.12
1952	.25	.36	.79	.73	1.36	3.56	1.42	1.00	.93	.47	.89	2.91	14.67
1953	.58	.63	.70	1.36	2.07	2.47	1.15	1.35	.48	.56	.46	.69	12.50
1954	.65	.56	1.95	2.43	1.05	1.18	2.01	.75	.37	.57	.31	.24	12.07
1955	.43	.45	.67	1.06	1.14	.81	1.91	.45	.40	.87	.54	.44	9.17
1956	.44	.52	.50	.57	1.48	1.78	1.33	1.21	.43	.36	.35	.40	9.37
1957	.52	.47	.66	.67	.70	1.71	.98	1.44	.66	.32	.31	.40	8.84
1958	.47	2.32	1.81	2.29	1.60	2.71	2.38	2.35	1.10	1.48	.73	.45	19.69
1959	.68	.57	.80	1.60	2.21	2.20	2.54	.89	.69	1.38	.87	1.04	15.47
1960	3.08	1.50	1.49	2.47	4.38	2.88	3.64	1.20	.79	.94	.97	.93	24.27

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	442	8.88
1951	1203	2,970	Apr. 12, 1951	150	403	0.597	8.12	379	7.63
1952	1233	15,000	Sept. 3, 1952	134	728	1.08	14.67	753	15.18
1953	1273	4,350	Feb. 19, 1953	184	621	.920	12.50	685	13.75
1954	1333	5,800	Apr. 4, 1954	134	600	.889	12.07	520	10.46
1955	1363	7,720	Apr. 17, 1955	125	456	.676	9.17	451	9.08
1956	1433	5,230	Mar. 20, 1956	126	465	.689	9.37	474	9.56
1957	1503	4,520	May 15, 1957	129	439	.650	8.84	586	11.79
1958	1553	7,260	Jan. 27, 1958	202	979	1.45	19.69	852	17.14
1959	1623	6,400	Apr. 15, 1959	214	770	1.14	15.47	970	19.49
1960	1703	7,960	Apr. 7, 1960	280	1,202	1.78	24.27	-	-

1320. Lynch's River at Effingham, S. C.

Location.--Lat 34°03'05", long 79°45'15", on left bank at downstream side of bridge on U.S. Highway 52, 75 ft upstream from Atlantic Coast Line Railroad bridge and 1 mile south of Effingham, Florence County.

Drainage area.--1,030 sq mi, approximately.

Records available.--August 1929 to September 1960. Gage-height records collected at same site since 1891 are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 58.49 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Sept. 7, 1934, staff gage at same site and datum.

Average discharge.--31 years (1929-60), 945 cfs.

Extremes.--1929-60: Maximum discharge, 25,000 cfs Sept. 22, 1945 (gage height, 21.21 ft), from rating curve extended above 17,000 cfs by logarithmic plotting; minimum, 94 cfs Oct. 10, 1954.

Remarks.--Records of chemical analyses and water temperatures for the period October 1951 to September 1952 and of water temperatures for the period October 1954 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	427	405	629	749	644	802	1,383	334	221	341	312	221	538
1952	163	278	491	533	1,168	2,510	1,318	945	614	302	534	2,328	928
1953	428	478	583	1,106	1,658	2,500	871	817	302	384	301	313	808
1954	480	341	1,090	1,520	1,026	843	1,467	530	232	225	158	116	668
1955	219	259	417	703	947	574	1,375	353	257	460	398	363	523
1956	298	330	368	387	1,312	1,433	1,028	793	284	227	231	209	572
1957	381	300	384	427	558	1,229	1,008	824	501	220	209	242	524
1958	284	756	1,777	1,619	1,991	1,992	2,942	1,760	769	1,348	466	331	1,332
1959	392	339	454	1,012	1,853	1,983	2,041	836	612	1,142	976	1,009	1,048
1960	3,095	1,627	1,641	2,110	4,219	2,622	3,217	789	528	563	871	712	1,823

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.48	0.44	0.70	0.84	0.65	0.90	1.50	0.37	0.24	0.38	0.35	0.24	7.09
1952	.18	.30	.55	.60	1.22	2.81	1.43	1.06	.66	.34	.60	2.52	12.27
1953	.48	.52	.65	1.23	1.68	2.80	.94	.91	.33	.43	.54	.34	10.65
1954	.54	.37	1.22	1.71	1.04	.94	1.58	.59	.25	.25	.18	.13	8.80
1955	.25	.28	.47	.79	.96	.64	1.48	.40	.28	.52	.44	.39	6.90
1956	.33	.36	.41	.43	1.37	1.60	1.11	.89	.31	.25	.26	.23	7.55
1957	.43	.32	.43	.48	.56	1.37	1.09	.92	.54	.25	.23	.26	6.88
1958	.32	.82	1.99	1.81	2.01	2.22	3.19	1.97	.83	1.51	.52	.36	17.55
1959	.44	.37	.51	1.13	1.87	2.22	2.21	.94	.66	1.28	1.09	1.09	13.81
1960	3.46	1.76	1.83	2.36	4.42	2.94	3.48	.88	.57	.63	.98	.77	24.08

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	593	7.82
1951	1203	2,120	Apr. 17, 1951	148	538	0.522	7.09	493	6.50
1952	1233	10,900	Sept. 6, 1952	139	928	.901	12.27	975	12.89
1953	1273	3,920	Feb. 23, 1953	220	808	.784	10.65	844	11.13
1954	1333	3,720	Apr. 8, 1954	100	668	.649	8.80	532	7.67
1955	1383	3,920	Apr. 22, 1955	95	523	.508	6.90	532	7.00
1956	1433	2,840	Mar. 25, 1956	130	572	.555	7.55	578	7.63
1957	1503	2,260	May 21, 1957	130	524	.509	6.88	671	8.83
1958	1553	5,290	Feb. 1, 1958	198	1,332	1.29	17.55	1,195	15.74
1959	1623	3,840	Feb. 12, 1959	242	1,048	1.02	13.81	1,484	19.54
1960	1703	8,840	Apr. 10, 1960	284	1,823	1.77	24.08	-	-

1325. Little Pee Dee River near Dillon, S. C.

Location.--Lat 34°24', long 79°20', near center of span on downstream side of bridge on State Highway 9, 1.1 miles east of Dillon, Dillon County, and 3 miles upstream from Maple Swamp.

Drainage area.--524 sq mi.

Records available.--March 1939 to September 1960.

Gage.--Wire-weight gage and since Mar. 16, 1955, crest-stage gage. Datum of gage is 75.14 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by South Carolina Highway Department).

Average discharge.--21 years (1939-60), 535 cfs.

Extremes.--1939-60: Maximum discharge, 9,810 cfs Sept. 20, 1945 (gage height, 14.64 ft), from rating curve extended above 2,800 cfs by velocity-area studies and logarithmic plotting; minimum, 24 cfs Sept. 17, 23, 1954 (gage height, 2.95 ft).

Remarks.--Records of chemical analyses and water temperatures for the period October 1952 to September 1953 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	285	228	424	396	322	446	681	193	149	112	130	105	289
1952	98.1	164	255	260	464	938	560	304	440	128	204	707	375
1953	268	418	400	478	829	1,231	442	670	558	301	141	153	489
1954	181	164	485	679	505	483	1,029	319	149	81.3	45.7	37.4	345
1955	243	214	329	426	545	531	943	291	245	266	386	999	449
1956	532	363	385	354	1,000	893	632	385	148	155	202	241	439
1957	536	358	480	324	377	784	529	285	491	150	263	382	412
1958	412	1,056	1,537	1,349	1,182	1,285	1,335	1,275	590	1,280	275	182	981
1959	351	277	378	722	1,342	1,171	1,508	512	491	755	395	513	696
1960	1,607	873	1,119	1,335	2,048	1,558	1,535	504	320	362	654	563	1,020

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.63	0.49	0.93	0.87	0.64	0.98	1.45	0.42	0.32	0.25	0.29	0.22	7.49
1952	.22	.35	.56	.57	.95	2.06	1.19	.67	.94	.28	.45	1.51	9.75
1953	.59	.89	.88	1.05	1.64	2.71	.94	1.48	1.18	.66	.31	.33	12.66
1954	.40	.35	1.07	1.50	1.00	1.06	2.19	.70	.32	.18	.10	.08	8.95
1955	.53	.46	.72	.94	1.08	1.16	2.01	.64	.52	.59	.85	2.13	11.63
1956	1.18	.77	.85	.78	2.06	1.96	1.35	.85	.31	.34	.44	.51	11.40
1957	1.18	.72	1.06	.71	.75	1.73	1.13	.63	1.05	.53	.58	.81	10.68
1958	.91	2.25	3.38	2.96	2.35	2.82	2.84	2.80	1.26	2.84	.61	.39	25.41
1959	.77	.59	.83	1.59	2.67	2.57	3.21	1.13	1.05	1.66	.87	1.09	18.03
1960	3.54	1.86	2.47	2.94	4.22	3.42	2.84	1.11	.68	.80	1.44	1.19	26.51

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	330	8.56	
1951	1203	1,200	Apr. 11, 1951	48	289	0.552	7.49	254	6.57	
1952	1233	1,540	Sept. 5, 6, 1952	50	375	.716	9.75	423	10.98	
1953	1273	2,240	May 9, 1953	62	489	.933	12.66	468	12.12	
1954	1333	1,630	Apr. 12, 13, 1954	24	345	.658	8.95	341	8.84	
1955	1383	3,240	Apr. 17, 1955	26	449	.857	11.63	491	12.72	
1956	1433	1,820	Feb. 9, 1956	94	439	.838	11.40	445	11.56	
1957	1503	1,200	June 12, 13, 1957	100	412	.786	10.68	550	14.26	
1958	1553	3,090	Dec. 1, 1957	126	981	1.87	25.41	814	21.06	
1959	1623	2,710	Apr. 17, 1959	189	696	1.33	18.03	914	23.71	
1960	1703	4,650	Oct. 17, 1959	158	1,020	1.95	26.51	-	-	

1335. Drowning Creek near Hoffman, N. C.

Location.--Lat 35°03'38", long 79°29'39", on right bank 10 ft downstream from bridge on U.S. Highway 1, three-quarters of a mile downstream from Deep Creek, 1 mile upstream from Seaboard Air Line Railroad bridge, and 4 miles northeast of Hoffman, Richmond County.

Drainage area.--178 sq mi.

Records available.--October 1939 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 270 ft (from topographic map).

Average discharge.--21 years (1939-60), 261 cfs.

Extremes.--1939-60: Maximum discharge, 10,900 cfs Sept. 18, 1945 (gage height, 10.29 ft), from rating curve extended above 5,600 cfs by logarithmic plotting; minimum, 28 cfs Aug. 4, 1940 (gage height, 1.32 ft).

Remarks.--Records of chemical analyses for the period October 1954 to September 1955 and water temperatures for the period October 1954 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	134	123	198	172	158	184	272	94.7	108	79.9	95.9	75.2	141
1952	77.3	131	194	194	451	619	353	250	174	81.4	186	299	250
1953	133	299	244	391	432	552	376	292	174	134	125	134	273
1954	115	120	344	466	338	322	410	213	135	110	64.9	43.5	223
1955	221	169	255	241	280	211	289	196	92.1	129	198	209	207
1956	203	186	150	152	324	340	266	315	135	393	187	177	236
1957	173	158	217	182	242	307	171	328	284	85.6	186	260	214
1958	269	468	464	469	439	441	485	465	236	195	145	87.8	347
1959	217	147	205	268	360	321	461	233	293	427	260	279	289
1960	413	310	307	420	687	556	557	285	172	153	158	160	347

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.87	0.77	1.28	1.11	0.92	1.19	1.70	0.61	0.68	0.52	0.62	0.47	10.74
1952	.50	.82	1.25	1.26	2.73	4.01	2.21	1.62	1.09	.53	1.20	1.68	19.10
1953	.86	1.87	1.58	2.53	2.53	3.58	2.35	1.89	1.09	.87	.81	.84	20.80
1954	.75	.75	2.23	3.02	1.98	2.09	2.57	1.38	.85	.71	.42	.27	17.02
1955	1.43	1.06	1.65	1.56	1.64	1.36	1.81	1.27	.58	.83	1.28	1.31	15.78
1956	1.32	1.16	.97	.99	1.97	2.20	1.66	2.04	.85	2.54	1.21	1.11	18.02
1957	1.12	.99	1.41	1.18	1.42	1.99	1.07	2.12	1.66	.55	1.21	1.63	16.35
1958	1.74	2.94	3.00	3.04	2.57	2.85	3.04	3.01	1.48	1.26	1.94	.55	26.42
1959	1.41	.92	1.33	1.74	2.11	2.08	2.89	1.51	1.83	2.76	1.68	1.75	22.01
1960	2.68	1.95	1.99	2.72	4.16	3.60	3.49	1.84	1.08	.68	1.03	1.01	26.54

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	192	14.62
1951	1203	576	Apr. 11, 1951	37	141	0.792	10.74	137	10.39
1952	1233	1,490	Sept. 2, 1952	44	250	1.49	19.10	273	20.84
1953	1273	1,660	Nov. 22, 1952	61	273	1.53	20.80	265	20.22
1954	1333	1,430	Jan. 24, 1954	34	223	1.25	17.02	228	17.43
1955	1383	1,600	Oct. 17, 1954	33	207	1.16	15.78	198	15.09
1956	1433	8,000	July 21, 1956	58	236	1.33	18.02	237	18.09
1957	1503	1,510	May 13, 1957	53	214	1.20	16.35	269	20.51
1958	1553	1,110	Nov. 25, 1957	76	347	1.95	26.42	294	22.40
1959	1623	1,510	June 4, 1959	84	289	1.62	22.01	327	24.97
1960	1703	1,080	Apr. 7, 1960	84	347	1.95	26.54	-	-

1345. Lumber River at Boardman, N. C.

Location (revised).--Lat 34°26'32", long 78°57'38", on right bank 50 ft downstream from bridge on U.S. Highway 74, 1 mile downstream from Atlantic Coast Line Railroad bridge at Boardman, Columbus County, and 1½ miles downstream from Big Swamp.

Drainage area.--1,220 sq mi, approximately.

Records available.--September 1929 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 72.05 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to Sept. 30, 1936, staff gage at site 100 ft downstream at same datum. Sept. 30, 1936, to June 8, 1943, wire-weight gage at present site and datum.

Average discharge.--31 years (1929-60), 1,266 cfs.

Extremes.--1929-60: Maximum discharge, 13,400 cfs Sept. 24, 1945 (gage height, 10.64 ft); minimum, 87 cfs Oct. 14, 1954 (gage height, -0.03 ft).
Maximum stage known, 11.8 ft in August 1928, from floodmark witnessed by local resident (discharge, 25,000 cfs).

Remarks.--Records of chemical analyses for the period October 1956 to September 1957 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	725	594	899	989	761	945	1,230	462	299	343	297	184	644
1952	172	307	464	555	1,442	2,265	1,399	675	527	281	422	1,507	830
1953	514	635	1,149	1,271	1,769	2,944	1,275	1,765	412	414	292	225	1,054
1954	275	288	965	1,629	1,528	1,370	2,457	815	355	245	138	109	842
1955	305	424	642	852	1,335	1,136	1,693	650	333	427	1,171	3,925	1,067
1956	1,486	721	924	740	2,289	2,116	1,374	1,071	357	448	607	480	1,048
1957	1,077	876	814	899	1,070	2,442	1,394	784	2,163	610	334	861	1,108
1958	1,074	1,623	3,838	3,298	2,846	2,800	3,111	2,996	1,455	2,017	618	559	2,186
1959	1,119	792	780	1,797	3,171	3,192	3,569	1,184	733	1,228	1,000	786	1,601
1960	2,011	1,818	1,941	2,699	3,863	3,403	2,466	964	680	584	1,517	1,426	1,941

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.69	0.54	0.85	0.93	0.65	0.89	1.12	0.44	0.27	0.32	0.28	0.17	7.15
1952	.16	.28	.44	.52	1.27	2.14	1.28	.64	.48	.27	.40	1.58	9.26
1953	.49	.58	1.09	1.20	1.51	2.78	1.17	1.67	.58	.39	.28	.21	11.75
1954	.26	.26	.91	1.54	1.30	1.29	2.25	.77	.32	.23	.13	.10	9.36
1955	.29	.39	.61	.81	1.14	1.07	1.55	.61	.30	.40	1.11	3.59	11.87
1956	1.40	.68	.87	.70	2.02	2.00	1.26	1.01	.33	.42	.57	.44	11.68
1957	1.02	.80	.77	.85	.91	2.51	1.27	.74	1.99	.58	.32	.79	12.34
1958	1.01	1.48	3.63	3.12	2.43	2.65	2.85	2.83	1.33	1.91	.58	.51	24.33
1959	1.06	.72	.74	1.70	2.71	3.02	3.26	1.12	.67	1.16	.95	.72	17.83
1960	1.90	1.66	1.83	2.55	3.42	3.22	2.26	.91	.62	.55	1.43	1.30	21.65

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	-	887	9.88
1951	1203	41,600	Apr. 12, 1951	116	644	0.528	7.15	887	9.88	556	5.95
1952	1233	2,740	Mar. 15-29, 1952	131	830	.680	9.26	944	10.54	944	10.54
1953	1273	3,940	May 12, 1953	154	1,054	.864	11.75	990	11.02	990	11.02
1954	1333	3,260	Apr. 13-15, 1954	93	842	.690	9.36	829	9.22	829	9.22
1955	1383	5,170	Sept. 6-11, 1955	88	1,067	.875	11.87	1,215	13.51	1,215	13.51
1956	1433	4,360	Oct. 3, 1955	238	1,048	.859	11.68	1,016	11.34	1,016	11.34
1957	1503	4,180	June 17, 1957	205	1,108	.908	12.34	1,426	15.87	1,426	15.87
1958	1553	6,230	Dec. 3, 1957	275	2,186	1.79	24.33	1,862	20.73	1,862	20.73
1959	1623	5,990	Mar. 9-10, 1959	275	1,601	1.31	17.83	1,860	20.70	1,860	20.70
1960	1703	4,650	Feb. 22-23, 26-28	306	1,941	1.59	21.65	-	-	-	-

a Maximum daily discharge.

1350. Little Pee Dee River at Galivants Ferry, S. C.

Location.--Lat 34°03'25", long 79°14'50", near left bank on downstream side of bridge on U.S. Highway 501, at Galivants Ferry, Horry County, 1.0 mile downstream from Lake Swamp.

Drainage area.--2,790 sq mi, approximately.

Records available.--October 1941 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Wire-weight gage and since Mar. 17, 1955, crest-stage gage. Datum of gage is 23.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--19 years (1941-60), 3,020 cfs.

Extremes.--1941-60: Maximum discharge, 26,800 cfs Sept. 23, 1945 (gage height, 13.23 ft, from graph based on gage readings); minimum, 155 cfs Oct. 12, 13, 1954.
Maximum stage known, 16.0 ft in September 1928, from floodmark set by local resident.

Remarks.--Records of chemical analyses and water temperatures for the period October 1950 to September 1951 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,051	1,203	1,540	2,028	1,451	2,200	3,923	926	467	615	701	373	1,371
1952	344	531	821	1,082	2,052	4,809	3,245	1,160	790	747	712	5,611	1,652
1953	1,361	1,178	2,444	2,775	4,047	7,416	2,637	2,620	1,045	1,039	612	465	2,299
1954	631	624	2,082	3,329	3,149	2,625	5,751	1,536	639	404	281	212	1,760
1955	485	808	1,043	1,685	2,999	2,337	4,277	1,615	829	889	1,059	8,463	2,186
1956	4,322	1,356	2,013	1,458	5,433	4,950	3,095	2,653	719	749	1,034	911	2,384
1957	1,664	1,410	1,294	1,680	2,014	5,565	3,338	1,282	2,885	1,013	800	1,234	1,996
1958	1,759	1,764	8,173	8,009	7,212	7,113	9,239	6,721	3,758	5,819	1,973	1,696	5,266
1959	1,716	1,646	1,388	3,761	7,791	9,012	7,765	3,234	1,650	2,407	2,582	2,433	3,754
1960	7,084	5,947	5,643	8,074	11,140	10,020	6,836	1,912	1,226	2,146	4,750	3,753	5,695

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.43	0.48	0.64	0.84	0.54	0.91	1.57	0.38	0.19	0.25	0.29	0.15	6.67
1952	.14	.21	.34	.45	.79	1.98	1.29	.48	.32	.31	.29	1.44	8.04
1953	.56	.47	1.01	1.15	1.51	3.07	1.05	1.08	.42	.43	.25	.19	11.19
1954	.26	.25	.86	1.37	1.18	1.08	2.30	.64	.26	.17	.12	.08	8.57
1955	.20	.32	.43	.70	1.11	.97	1.71	.67	.33	.37	.44	3.38	10.63
1956	1.79	.54	.83	.60	2.10	2.04	1.24	1.10	.29	.31	.43	.36	11.63
1957	.69	.56	.53	.69	.75	2.29	1.34	.53	1.15	.42	.25	.49	9.69
1958	.73	.71	3.38	3.31	2.69	2.94	3.69	2.78	1.51	2.41	.82	.68	25.65
1959	.71	.66	.57	1.56	2.90	3.72	3.10	1.34	.66	.99	1.07	.97	18.25
1960	2.93	2.38	2.33	3.33	4.30	4.14	2.73	.79	.49	.89	1.96	1.51	27.78

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,636	7.95
1951	1203	4,890	Apr. 14-16, 1951	282	1,571	0.491	6.67	1,195	5.81
1952	1233	6,690	Mar. 31 to Apr. 2	239	1,652	.592	6.04	1,929	9.39
1953	1273	9,750	Mar. 19, 1953	367	2,299	.824	11.19	2,161	10.52
1954	1333	7,930	Apr. 12-16, 1954	184	1,760	.631	8.57	1,675	8.15
1955	1383	13,900	Sept. 11, 1955	158	2,186	.784	10.63	2,639	12.84
1956	1433	9,270	(a)	520	2,384	.854	11.63	2,102	10.25
1957	1503	7,510	Mar. 12-14, 1957	452	1,996	.715	9.69	2,617	12.73
1958	1553	12,000	Apr. 7, 8, 1958	622	5,266	1.89	25.65	4,677	22.77
1959	1623	17,600	Mar. 10, 1959	690	3,754	1.35	18.25	4,924	23.95
1960	1703	14,800	Aug. 2, 1960	930	5,695	2.04	27.78	-	-

a Oct. 1, 1955, Feb. 13, 14, 1956.

1355. Black River near Gable, S. C.

Location.--Lat 33°54'00", long 80°09'55", near left bank on downstream side of McBride Crossing on U.S. Highway 378, 1 mile downstream from Church Branch and 6.3 miles northwest of Gable, Clarendon County.

Drainage area.--401 sq mi.

Records available.--June 1951 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 95 ft (from topographic map). Prior to Dec. 9, 1955, wire-weight gage at same site and datum.

Average discharge.--9 years (1951-60), 326 cfs.

Extremes.--1951-60: Maximum discharge, 4,150 cfs Sept. 3, 1952 (gage height, 5.22 ft, from graph based on gage readings); no flow July 10-17, Aug. 2 to Oct. 17, 1954, July 17, 18, 1956, Aug. 9-15, Sept. 6, 7, 1957.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	66.1	53.4	107	55.4	-
1952	23.3	125	227	249	477	931	566	428	363	112	323	1,045	404
1953	207	261	283	474	698	970	295	279	92.0	58.9	66.1	51.5	310
1954	126	121	497	529	318	257	245	138	69.7	3.13	0	0	192
1955	4.15	10.9	101	241	350	197	288	166	151	115	109	132	154
1956	82.3	156	249	239	458	453	420	205	57.2	34.3	122	206	222
1957	234	185	228	232	250	390	234	158	151	30.5	2.52	11.6	175
1958	39.9	143	474	628	540	678	1,367	623	230	339	133	43.4	436
1959	82.0	88.0	208	284	575	783	529	367	287	504	326	348	364
1960	1321	732	754	756	1,623	893	1,108	217	108	185	243	235	678

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	0.18	0.15	0.31	0.15	-
1952	0.07	0.35	0.65	0.72	1.28	2.68	1.57	1.23	1.01	.32	.93	2.91	13.72
1953	.59	.73	.81	1.36	1.81	2.79	†.82	.80	.26	.17	.19	.14	10.47
1954	.56	.34	1.43	1.52	.83	.74	.68	.40	.19	.009	.000009	0	6.50
1955	.01	.03	.29	.69	.91	.57	.80	.48	.42	.33	.31	.37	5.21
1956	.24	.43	.72	.69	1.23	1.30	1.17	.59	.16	.10	.35	.57	7.55
1957	.67	.51	.66	.67	.65	1.12	.65	.45	.43	.09	.007	.03	5.94
1958	.12	.40	1.36	1.81	1.41	1.95	3.80	1.79	.64	.97	.38	.12	14.75
1959	.24	.24	.60	.82	1.49	2.25	1.47	1.05	.80	1.45	.94	.97	12.32
1960	3.79	2.04	2.17	2.18	4.37	2.57	3.08	.62	.30	.53	.70	.65	23.00

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1233	-	-	-	-	-	-	-	-
1952	1233	4,150	Sept. 3, 1952	12	404	1.01	13.72	436	14.78
1953	1275	1,660	Feb. 28, 1953	2	310	.773	10.47	309	10.47
1954	1335	742	Dec. 17, 1953	0	192	.479	6.50	139	4.70
1955	1383	518	Apr. 17, 18, 1955	0	154	.384	5.21	185	6.27
1956	1433	835	Feb. 9, 1956	0	222	.554	7.55	236	8.00
1957	1503	713	Mar. 28, 1957	0	175	.436	5.94	176	5.98
1958	1553	3,780	Apr. 17, 1958	9	436	1.09	14.75	412	13.95
1959	1623	2,320	Mar. 8, 1959	10	364	.908	12.32	569	19.24
1960	1703	3,780	Apr. 7, 1960	11	678	1.69	23.00	-	-

1360. Black River at Kingstree, S. C.

Location.--Lat 33°39'40", long 79°50'10", on left bank at downstream side of bridge on U.S. Highway 52 at Kingstree, Williamsburg County, 1.0 mile downstream from Kingstree Swamp Canal.

Drainage area.--1,260 sq mi, approximately.

Records available.--August 1929 to September 1960. Gage-height records collected at same site since 1894 (revised) are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 25.66 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 7, 1934, tape gage at same site and datum.

Average discharge.--31 years (1929-60), 806 cfs.

Extremes.--1929-60: Maximum discharge, 29,100 cfs Sept. 20, 1945 (gage height, 16.07 ft); minimum, 2 cfs Sept. 12-15, Oct. 7, 8, 1954.

Maximum stage known, 18.0 ft Sept. 21, 1928 (discharge, 41,600 cfs, from rating curve extended above 27,000 cfs).

Correction.--In WSP 1303, the date for the momentary maximum for 1946 is listed in error; it should be Jan. 2, 3, 1946.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	137	207	482	861	521	720	1,599	182	15.4	52.7	171	96.6	419
1952	42.7	71.4	217	333	1,071	2,503	1,426	666	333	160	110	1,633	710
1953	416	241	442	969	1,589	3,567	581	328	107	31.1	21.2	44.4	692
1954	140	62.5	892	1,455	784	421	478	142	42.9	27.7	5.19	4.83	370
1955	18.5	10.6	39.3	514	686	469	1,110	294	205	313	305	1,103	401
1956	107	59.9	230	206	1,093	1,803	781	545	34.3	37.3	121	95.1	424
1957	215	130	232	333	385	1,017	776	232	226	170	57.7	48.8	318
1958	79.1	95.6	907	1,353	1,620	2,147	5,023	1,842	523	1,236	576	224	1,298
1959	106	94.0	222	576	2,331	3,524	1,653	678	497	1,678	1,223	960	1,122
1960	4,252	2,815	2,516	2,341	5,164	3,399	3,114	423	164	328	698	601	2,140

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.13	0.18	0.44	0.79	0.43	0.66	1.42	0.17	0.01	0.05	0.16	0.09	4.53
1952	.04	.06	.20	.30	.92	2.29	1.26	.61	.29	.15	.10	1.45	7.67
1953	.38	.21	.40	.89	1.31	3.26	.51	.30	.09	.03	.02	.04	7.44
1954	.13	.06	.82	1.33	.65	.39	.42	.13	.04	.03	.005	.004	4.01
1955	.02	.009	.04	.29	.57	.43	.98	.27	.18	.29	.28	.98	4.34
1956	.10	.05	.21	.19	.94	1.65	.69	.50	.03	.03	.11	.08	4.58
1957	.20	.11	.21	.30	.32	.93	.69	.21	.20	.18	.05	.04	3.42
1958	.07	.08	.83	1.23	1.34	1.96	4.45	1.68	.46	1.13	.53	.20	13.96
1959	.10	.08	.20	.53	1.93	3.23	1.46	.62	.44	1.53	1.12	.85	12.09
1960	3.88	2.49	2.31	2.14	4.42	3.10	2.76	.39	.14	.30	.64	.53	23.10

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	401	4.32
1951	1203	2,300	Apr. 8-10, 1951	12	419	0.333	4.53	377	4.08
1952	1233	5,780	Sept. 7, 1952	10	710	.563	7.67	775	8.36
1953	1273	5,240	Mar. 2-7, 1953	8	692	.549	7.44	692	7.46
1954	1333	1,860	Jan. 3-4, 1954	2	370	.294	4.01	283	3.07
1955	1383	3,900	Sept. 9, 1955	2	401	.318	4.34	429	4.63
1956	1433	2,670	Mar. 5, 1956	8	424	.337	4.58	439	4.74
1957	1503	1,590	Mar. 28-30, 1957	18	518	.252	3.42	361	3.86
1958	1553	11,800	Apr. 19, 1958	24	1,298	1.03	13.96	1,242	13.36
1959	1623	12,000	Mar. 9, 1959	75	1,122	.890	12.09	1,893	20.39
1960	1703	7,420	Dec. 22, 1959	69	2,140	1.70	23.10	-	-

1380. Catawba River near Marion, N. C.

Location.--Lat 35°42', long 82°02', on right bank 15 ft downstream from bridge on U.S. Highway 221, 0.2 mile downstream from Tom Creek, and 2.2 miles northwest of Marion, McDowell County. Records include flow of small tributary which enters above control.

Drainage area.--171 sq mi (including area of small tributary which enters above control).

Records available.--October 1941 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 1,208 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--19 years (1941-60), 315 cfs.

Extremes.--1941-60: Maximum discharge, 19,700 cfs Aug. 28, 1949 (gage height, 15.02 ft), from rating curve extended above 10,000 cfs on basis of logarithmic plotting and contracted-opening measurements at gage heights 15.02 and 19.34 ft; minimum, 28 cfs Sept. 30, Oct. 1, 5, 1954 (gage height, 0.50 ft).
Maximum stage known, 19.34 ft Aug. 13, 1940 (discharge, 71,400 cfs, from rating curve extended above 10,000 cfs as explained above).

Remarks.--Town of Marion diverts about 2 cfs for municipal water supply. Considerable diurnal fluctuation and slight regulation for short periods at low flow caused by powerplant above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	325	243	566	258	321	447	432	223	204	149	115	91.0	281
1952	81.9	135	329	231	477	762	437	271	171	114	194	136	279
1953	114	135	149	353	475	550	260	189	147	92.4	82.4	84.7	218
1954	78.5	85.1	189	435	310	353	279	293	146	91.6	60.3	40.0	196
1955	39.1	73.7	151	106	219	252	447	306	182	322	417	148	220
1956	124	114	104	96.7	372	301	386	218	112	122	64.1	107	176
1957	182	175	219	240	573	403	866	256	604	254	141	311	349
1958	355	501	481	432	419	499	721	541	292	224	161	112	395
1959	127	123	288	282	258	298	472	448	380	339	228	532	313
1960	646	381	375	437	849	624	664	354	277	251	376	214	453

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.19	1.58	3.81	1.74	1.96	3.01	2.82	1.50	1.33	1.01	0.78	0.59	22.32
1952	.55	1.00	2.22	1.56	3.01	5.14	2.85	1.83	1.12	.77	1.31	.89	22.25
1953	.77	.88	1.01	2.38	2.88	3.70	1.69	1.28	.96	.62	.56	.55	17.28
1954	.55	.56	1.27	2.93	1.89	2.38	1.82	1.97	.95	.62	.41	.26	15.59
1955	.26	.48	.88	.71	1.34	1.70	2.92	2.06	1.19	2.17	2.81	.97	17.49
1956	.84	.75	.70	.65	2.35	2.03	2.52	1.47	.73	.85	.43	.70	14.00
1957	1.23	1.13	1.48	1.62	3.49	2.72	5.65	1.72	3.94	1.72	.95	2.03	27.68
1958	2.39	3.27	3.24	2.91	2.55	3.37	4.70	3.65	1.91	1.51	1.09	.73	31.32
1959	.86	.80	1.94	1.90	1.45	2.01	3.08	3.02	2.48	2.29	1.54	3.47	24.84
1960	4.35	2.49	2.53	2.95	5.36	4.21	4.33	2.39	1.81	1.69	2.53	1.40	36.04

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	390	30.93	
1951	1203	9,620	Dec. 7, 1950	68	281	1.64	22.32	233	18.51	
1952	1233	7,010	Feb. 3, 1952	64	279	1.63	22.25	265	21.14	
1953	1273	4,750	Feb. 21, 1953	38	218	1.27	17.28	214	16.98	
1954	1335	7,100	Jan. 22, 1954	29	196	1.15	15.59	187	14.65	
1955	1363	6,200	Apr. 14, 1955	29	220	1.29	17.49	229	18.16	
1956	1433	2,290	Apr. 16, 1956	39	176	1.03	14.00	195	15.55	
1957	1503	9,040	Apr. 5, 1957	68	349	2.04	27.68	413	32.74	
1958	1553	3,090	Apr. 28, 1958	83	395	2.31	31.32	328	26.02	
1959	1623	6,600	Dec. 28, 1958	88	313	1.83	24.84	386	30.61	
1960	1703	5,100	Feb. 5, 1960	150	453	2.65	36.04	-	-	

1381.44. Lake James near Bridgewater, N. C.

Location--Lat 35°45', long 81°51', at dam on Catawba River, Linville River, and Paddy Creek, 2 miles northeast of Bridgewater, Burke County.

Drainage area--380 sq mi.

Records available--March 1920 to September 1960.

Gage--Float gage with indicator. Datum of gage is 1,100.0 ft above mean sea level, datum of 1929 (levels by Duke Power Co.). Supplemental staff gage on Catawba River portion is used when water surface drops below 1,160 ft (gage height, 60 ft) and the lake is separated into two parts.

Remarks--Lake James (locally known as Bridgewater Reservoir) used for hydroelectric power development was first put in operation May 5, 1919. The total capacity of 12,581,800,000 cu ft (revised), below gage height 100.0 ft (crest of spillway), is usable if needed by the power development system along the river. Records not previously published; changes in contents, equivalent in cubic feet per second, for a group of reservoirs including this one have been published since October 1936.

Cooperation--Records furnished by Duke Power Co.

Contents, in millions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1920	-	-	-	-	-	6,280	9,790	9,430	9,550	9,140	10,880	10,220
1921	8,690	8,350	10,980	10,250	10,950	11,200	12,070	11,950	11,280	12,410	10,900	8,560
1922	6,490	4,990	3,220	3,990	6,680	10,300	12,320	12,260	11,980	12,520	11,650	9,000
1923	7,990	4,040	3,190	2,710	4,880	7,170	8,560	12,010	11,250	10,650	10,250	8,930
1924	6,260	4,390	5,360	8,140	8,980	10,420	12,230	12,460	12,070	12,460	11,510	12,350
1925	9,940	7,280	7,470	9,390	8,670	9,250	9,070	8,520	7,470	6,350	4,783	3,348
1926	2,490	2,604	2,114	3,645	5,240	6,530	7,990	9,020	9,530	10,580	10,700	
1927	8,200	7,710	7,440	5,940	7,040	8,980	10,500	11,300	11,840	11,870	11,900	11,600
1928	10,750	9,530	10,920	9,740	10,200	10,680	12,440	12,180	11,540	11,460	12,550	12,460
1929	11,950	9,040	7,420	9,040	10,100	12,580	12,580	12,550	12,410	10,750	12,290	
1930	12,580	12,640	12,610	12,940	12,290	12,260	11,430	10,180	8,620	7,510	7,770	7,890
1931	6,830	6,260	5,770	5,820	5,220	5,890	8,540	9,770	9,530	8,140	7,650	5,300
1932	4,470	4,561	5,910	8,370	9,910	11,300	11,230	11,100	10,600	9,250	9,720	6,660
1933	9,110	11,380	12,820	12,290	12,350	12,090	12,490	12,070	9,460	8,200	7,870	6,790
1934	6,040	5,040	2,810	2,320	4,060	5,870	7,790	8,730	11,100	11,300	10,900	11,820
1935	11,410	10,350	11,930	12,350	11,930	12,700	12,460	11,360	10,320	10,400	9,270	8,800
1936	4,800	4,198	3,348	8,030	10,550	12,550	12,460	11,380	10,950	11,280	12,290	10,450
1937	12,290	9,040	10,130	12,580	12,580	11,600	12,010	11,570	11,570	11,250	12,180	10,850
1938	12,580	10,800	9,230	8,350	6,600	7,950	8,780	8,520	9,070	11,000	12,460	12,520
1939	11,700	11,430	9,230	10,820	12,730	11,840	10,720	9,940	9,840	10,450	11,760	11,050
1940	10,820	9,980	9,650	9,720	10,500	11,730	11,680	10,420	10,950	10,850	13,150	10,620
1941	10,200	9,960	9,840	10,030	9,860	10,550	11,050	10,480	10,520	12,230	12,490	11,620
1942	9,530	8,840	9,020	10,100	11,870	12,210	11,950	12,150	12,040	11,900	12,410	12,210
1943	11,330	11,180	12,610	12,580	11,700	12,230	12,230	12,070	12,010	12,090	11,730	11,600
1944	11,250	10,900	10,680	11,250	11,870	12,640	12,520	11,980	11,980	12,040	11,620	11,950
1945	11,650	10,950	11,570	11,730	12,390	11,700	12,410	11,790	11,700	12,320	11,840	12,490
1946	11,950	11,790	12,550	11,600	11,840	11,900	12,120	11,250	11,050	11,300	10,680	9,820
1947	9,620	9,000	8,450	10,780	11,100	12,090	12,380	11,930	12,120	11,870	11,050	9,580
1948	11,570	12,490	12,320	11,360	12,520	12,610	12,320	11,730	11,360	11,700	12,380	12,290
1949	11,150	12,820	12,580	12,070	12,380	12,410	12,320	12,320	12,180	12,520	12,910	11,510
1950	12,260	10,520	10,480	9,980	9,360	11,150	11,280	11,120	11,490	12,380	11,230	11,930
1951	11,050	9,180	10,420	7,950	6,370	7,320	9,550	8,870	8,580	9,080	9,080	8,330
1952	7,020	6,680	8,260	9,530	11,730	12,460	12,440	11,950	10,520	8,870	9,040	7,890
1953	5,990	5,460	5,960	8,080	10,820	12,380	12,230	12,090	12,350	11,650	10,300	10,280
1954	9,480	8,240	9,000	11,300	12,320	11,980	11,840	10,600	7,750	6,420	2,920	1,735
1955	1,866	2,409	3,375	4,020	5,340	7,000	9,840	11,200	11,330	11,150	10,150	8,580
1956	8,690	8,080	7,910	7,710	9,460	10,550	11,810	11,790	11,410	11,540	10,420	9,650
1957	10,700	9,410	9,840	10,360	12,150	11,810	11,840	12,010	12,080	11,510	10,420	10,600
1958	9,480	10,980	11,230	9,940	8,690	10,980	12,550	11,930	11,700	11,360	10,680	9,444
1959	8,564	7,347	7,744	8,904	8,582	10,638	12,108	12,190	11,808	11,916	11,460	11,593
1960	11,460	8,577	8,642	9,652	12,357	12,730	12,190	11,673	11,754	11,835	10,713	9,675

a Contents by capacity table used beginning Feb. 1, 1959; contents Feb. 28, 1959, by capacity table used prior to Feb. 1, 1959, was 9,550 million cubic feet.

1385. Linville River at Branch, N. C.

Location.--Lat 35°47'41" (revised), long 81°53'25" (revised), on right bank 20 ft downstream from bridge on State Highway 126 at Branch, Burke County, and 0.2 mile upstream from Lake James.

Drainage area.--67.2 sq mi (revised). At site used 1907-8, 71.4 sq mi (revised).

Records available.--May 1907 to August 1908 (fragmentary, published as "at Ponta Flora"). June 1922 to September 1960. Records for October to December 1908, "at Ponta Flora," published in WSP 242 have been found to be unreliable and should not be used.

Gage.--Water-stage recorder. Datum of gage is 1,205.87 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. May 1907 to August 1908 staff gage about 1.2 miles downstream at different datum. June 1922 to Aug. 12, 1937, staff gage at present site and datum.

Average discharge.--38 years (1922-60), 141 cfs.

Extremes.--1907-8, 1922-60: Maximum discharge, 39,500 cfs Aug. 13, 1940 (gage height, 11.4 ft), from rating curve extended above 6,400 cfs on basis of slope-area measurement of peak flow; minimum, 2 cfs Jan. 9, 1956 (result of freezeup); minimum daily, 8 cfs Sept. 7-9, 1925.

Flood in July 1916 reached a stage of about 11 ft (discharge, 34,600 cfs, from rating curve extended above 6,400 cfs as explained in preceding paragraph).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	153	75.5	293	104	150	208	191	78.1	84.2	67.0	60.4	32.6	123
1952	26.3	55.8	150	121	254	357	160	93.5	59.3	36.0	61.0	55.6	119
1953	31.7	67.0	83.9	257	276	351	117	105	69.2	52.8	32.5	41.6	123
1954	24.8	42.7	104	223	180	209	141	191	75.4	55.3	34.0	25.7	109
1955	18.9	45.5	107	61.8	158	200	296	106	70.8	89.4	142	50.4	112
1956	40.6	44.4	40.6	33.4	181	158	195	86.6	34.2	54.9	21.0	48.8	77.6
1957	175	149	130	152	386	191	471	128	318	113	44.2	141	198
1958	154	287	272	184	219	237	318	224	91.2	88.9	54.1	30.8	180
1959	39.6	38.0	117	145	115	146	233	114	108	84.6	68.6	266	123
1960	291	131	190	206	377	272	347	156	134	130	208	134	214

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.29	1.25	5.03	1.79	2.33	3.57	3.17	1.34	1.40	1.15	1.04	0.54	24.90
1952	.45	.93	2.58	2.07	4.07	6.13	2.66	1.60	.98	.62	1.05	.92	24.06
1953	.54	1.11	1.44	4.42	4.28	6.02	1.94	1.81	1.15	.91	.56	.69	24.87
1954	.43	.71	1.78	3.82	2.78	3.59	2.34	3.27	11.25	.95	.58	.43	21.93
1955	.32	.75	1.83	1.06	2.44	3.44	4.91	1.81	1.17	1.53	2.44	.86	22.56
1956	.70	.74	.70	.57	2.90	2.72	3.24	1.49	.57	.94	.36	.81	15.74
1957	3.00	2.47	2.24	2.61	5.99	3.28	7.82	2.20	5.28	1.93	.76	2.33	39.91
1958	2.64	4.76	4.67	3.15	3.59	4.06	5.28	3.85	1.51	1.52	.93	.51	36.27
1959	.68	.63	2.01	2.49	1.78	2.51	3.86	1.96	1.79	1.45	1.18	4.42	24.76
1960	4.98	2.18	3.25	3.54	6.05	4.66	5.75	2.68	2.22	2.24	3.56	2.23	43.34

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	-	142	28.64
1951	1203	8,030	Dec. 7, 1950	25	123	1.83	24.90	100	20.29	
1952	1233	5,500	Feb. 3, 1952	15	119	1.77	24.06	115	23.19	
1953	1273	3,820	Feb. 21, 1953	13	123	1.83	24.87	122	24.70	
1954	1333	3,370	Jan. 22, 1954	13	109	1.62	21.93	109	21.91	
1955	1383	5,680	Apr. 14, 1955	15	112	1.67	22.56	108	21.80	
1956	1433	1,690	Apr. 16, 1956	10	77.6	1.15	15.74	105	21.31	
1957	1503	5,750	Apr. 5, 1957	27	198	2.95	39.91	219	44.27	
1958	1553	2,740	Dec. 20, 1957	25	180	2.68	36.27	136	27.52	
1959	1623	6,900	Sept. 30, 1959	19	123	1.83	24.76	158	31.85	
1960	1703	2,520	Feb. 5, 1960	61	214	3.18	43.34	-	-	

1414.9. Rhodhiss Lake at Rhodhiss, N. C.

Location.--Lat 35°46', long 81°26', at dam on Catawba River, three-quarters of a mile west of Rhodhiss, Caldwell County, and $1\frac{1}{4}$ miles south of Granite Falls.

Drainage area.--1,088 sq mi.

Records available.--February 1925 to September 1960.

Gage.--Float gage. Datum of gage is 895.1 ft (revised) above mean sea level, datum of 1929 (levels by Duke Power Co.).

Remarks.--Lake used for hydroelectric power development was first put in operation Feb. 18, 1925. Total capacity is 3,188,592,000 cu ft and usable capacity is 1,717,004,520 cu ft between gage heights 85.0 and 100.0 ft (crest of spillway). Figures given herein represent usable contents. Records not previously published; changes in contents, equivalent in cubic feet per second, for a group of reservoirs including this one have been published since October 1936.

Cooperation.--Records furnished by Duke Power Co.

Contents, in millions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1925	-	-	-	-	(a)	(a)	(a)	171	(a)	(a)	(a)	(a)
1926	(a)	(a)	(a)	1,395	1,717	1,311	1,163	466	(a)	93	581	863
1927	560	828	1,353	547	1,203	935	1,022	614	828	985	1,010	592
1928	985	1,073	1,137	887	1,060	1,311	1,596	1,325	1,339	1,150	1,686	1,717
1929	1,325	690	507	518	1,936	1,794	1,717	1,611	1,702	1,466	839	1,353
1930	1,686	1,717	1,702	1,538	1,494	1,480	1,098	899	476	191	518	497
1931	528	635	290	376	171	581	603	1,163	426	367	376	(a)
1932	(a)	(a)	581	1,611	1,270	851	770	338	309	507	153	25
1933	1,409	1,423	1,936	1,216	1,409	1,230	1,582	1,311	985	839	549	456
1934	101	(a)	(a)	(a)	101	1,311	1,243	528	668	624	816	863
1935	758	1,567	747	1,509	1,339	1,778	1,437	1,047	1,098	1,163	804	508
1936	498	272	181	770	770	1,582	1,509	1,270	1,163	1,086	1,177	1,124
1937	1,297	95	1,524	1,857	1,687	1,230	1,216	1,339	924	911	1,687	1,055
1938	1,717	1,150	1,048	936	1,150	690	310	758	110	1,552	747	724
1939	427	427	592	936	1,873	985	1,190	690	539	1,137	839	758
1940	581	388	508	272	887	828	1,022	457	539	488	2,119	1,073
1941	320	539	997	828	828	320	348	190	110	1,366	1,509	1,230
1942	924	936	1,422	1,256	1,270	1,538	1,270	1,394	1,494	1,311	1,466	1,422
1943	1,086	1,048	1,671	1,748	1,270	1,256	1,297	1,270	1,150	1,283	1,124	1,112
1944	936	1,022	1,010	1,035	816	1,480	1,671	1,456	1,283	1,394	1,150	1,687
1945	1,297	1,203	1,243	997	1,073	911	1,243	973	1,099	1,270	960	1,552
1946	1,352	1,035	1,702	1,035	997	1,203	1,216	1,243	1,073	1,060	973	1,060
1947	770	614	887	1,394	1,137	1,311	1,422	1,297	1,422	1,230	948	887
1948	1,567	1,552	1,380	1,366	1,611	1,626	1,422	1,641	1,163	1,150	1,311	1,509
1949	1,339	1,733	1,702	1,480	1,422	1,524	1,567	1,538	1,509	1,641	1,795	1,048
1950	1,687	1,230	1,422	1,270	1,022	1,048	1,137	985	911	839	1,099	1,567
1951	1,048	875	1,283	657	960	1,524	1,283	1,048	973	701	657	781
1952	528	427	1,597	1,325	1,086	1,456	1,297	1,256	1,283	747	1,073	1,022
1953	985	1,311	816	1,325	1,552	1,325	1,297	1,256	1,366	1,010	1,073	1,150
1954	1,099	1,216	924	1,422	1,112	985	1,137	1,150	960	1,035	1,216	1,641
1955	1,311	985	948	997	1,048	1,035	1,124	1,112	1,073	1,216	997	1,060
1956	1,073	960	1,216	1,073	1,086	1,270	1,163	1,150	1,060	1,099	997	1,582
1957	408	1,137	1,466	1,422	1,243	1,509	1,380	1,394	1,325	1,283	828	1,538
1958	985	1,466	1,073	1,176	1,353	1,567	1,702	1,353	1,381	1,150	1,284	1,163
1959	1,073	1,339	1,582	1,098	1,098	1,163	1,035	1,311	1,311	1,216	1,437	1,820
1960	1,203	1,124	1,216	1,582	1,437	1,778	1,339	1,325	1,216	1,325	1,098	1,176

a Lake elevation below 85.0 ft which is the lower limit of usable contents.

1419.61. Lake Hickory near Taylorsville, N. C.

Location.--Lat 35°49', long 81°11' (revised), at dam on Catawba River, 2 miles upstream from Lower Little River and 7 miles south of Taylorsville, Alexander County.

Drainage area.--1,310 sq mi, approximately.

Records available.--April 1928 to September 1960.

Gage.--Float gage and indicator. Datum of gage is 835.0 ft above mean sea level, datum of 1929 (levels by Duke Power Co.).

Remarks.--Lake Hickory (locally known as Oxford Reservoir) used for hydroelectric power development was first put in operation Apr. 5, 1928. Total capacity is 5,552,985,240 cu ft of which 3,378,400,000 cu ft between gage heights 75.0 and 100.0 ft (top of flood gates in closed position) was considered usable capacity Apr. 30, 1928, to Aug. 31, 1935, and Oct. 31, 1957, to Sept. 30, 1960; during the period Sept. 30, 1935, to Sept. 30, 1957, usable capacity was considered to be only 2,277,970,200 cu ft between gage heights 85.0 and 100.0 ft. Figures given herein represent usable contents. Records not previously published; changes in contents, equivalent in cubic feet per second, for a group of reservoirs including this one have been published since October 1936.

Cooperation.--Records furnished by Duke Power Co.

Water year	Contents, in millions of cubic feet, on last day of month											
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	-	-	-	-	414	2,892	2,627	2,372	3,254	3,132
1929	2,792	1,888	1,645	1,507	2,994	3,254	3,325	3,507	3,272	2,725	2,201	3,028
1930	3,325	3,325	3,325	3,097	3,132	3,080	2,692	2,263	1,786	1,151	1,589	1,917
1931	1,786	1,772	1,902	1,631	1,359	1,426	2,309	2,294	1,659	1,603	2,005	1,126
1932	726	668	1,946	3,236	2,709	2,692	1,888	1,603	1,715	1,729	1,603	1,280
1933	3,272	3,080	3,149	2,977	3,132	2,842	3,272	3,114	2,676	2,125	1,946	1,426
1934	1,202	928	784	772	1,126	2,419	2,892	1,917	2,155	2,065	2,498	2,140
1935	2,556	2,775	2,155	3,325	3,097	3,360	3,507	2,546	2,372	2,692	2,186	al,162
1936	580	280	330	1,742	1,478	2,242	2,101	1,758	1,478	1,334	1,842	1,510
1937	1,775	1,224	1,775	2,242	2,118	1,742	1,808	1,758	1,576	1,382	1,675	520
1938	636	1,592	1,494	1,350	1,334	1,608	680	506	829	1,742	1,319	1,070
1939	520	622	695	904	2,118	1,725	1,334	1,178	695	964	1,893	1,209
1940	814	607	564	520	889	1,101	1,775	1,519	1,350	1,240	2,260	1,478
1941	1,146	919	1,608	1,527	1,478	2,101	1,792	1,742	1,641	1,945	2,066	1,758
1942	1,287	1,350	1,334	1,592	1,559	2,066	1,825	2,031	2,031	1,859	2,014	1,962
1943	1,708	1,608	2,171	2,278	1,775	1,876	1,996	1,792	2,083	1,842	1,825	1,543
1944	1,430	1,255	1,101	1,494	1,658	2,224	1,996	1,962	1,842	1,945	1,893	2,136
1945	1,758	1,576	1,608	1,608	2,206	1,398	1,825	1,825	1,608	2,031	1,527	1,927
1946	1,876	1,478	2,260	1,559	1,576	1,625	1,725	2,031	1,742	1,876	1,876	1,224
1947	1,085	1,382	1,085	1,876	1,742	1,945	2,048	1,979	2,136	1,842	1,876	1,398
1948	2,224	2,206	2,083	1,876	2,118	2,242	2,153	2,066	1,859	1,996	2,136	1,945
1949	1,527	2,260	2,260	1,675	2,014	2,153	2,048	2,136	2,136	2,153	2,260	1,910
1950	2,206	1,510	1,625	1,510	1,608	1,808	1,334	1,862	1,758	1,996	1,178	2,014
1951	1,691	1,131	1,675	979	1,009	1,608	1,979	964	1,658	1,808	904	607
1952	764	874	2,171	2,101	1,927	2,224	2,153	1,842	1,842	1,462	1,478	1,162
1953	919	549	784	1,859	2,066	2,136	1,927	1,641	1,691	1,676	1,478	1,334
1954	1,510	1,494	1,691	2,101	1,825	1,859	1,758	1,842	1,742	1,792	2,048	2,136
1955	2,031	1,825	1,775	1,758	1,808	1,675	1,825	1,691	1,625	1,758	1,641	1,592
1956	1,641	1,625	1,658	1,543	1,725	1,825	1,708	1,576	1,510	1,592	1,576	1,962
1957	1,876	1,527	2,031	1,962	1,859	1,775	1,962	1,825	1,927	1,775	1,910	bl,927
1958	2,758	3,184	2,758	2,775	3,149	2,926	3,360	2,842	2,909	2,725	2,792	2,692
1959	2,482	2,792	3,114	2,692	2,692	2,775	2,692	2,943	2,758	2,792	3,132	3,360
1960	2,692	2,875	2,660	2,909	3,132	3,360	2,725	2,725	2,842	2,892	2,692	2,660

a Contents by capacity table used beginning Sept. 30, 1935; contents Sept. 30, 1935, by capacity table used prior to Sept. 30, 1935, was 2,263 million cubic feet.

b Contents by capacity table used Sept. 30, 1935, to Sept. 30, 1957; contents Sept. 30, 1957, by capacity table used Oct. 31, 1957, to Sept. 30, 1960, was 3,028 million cubic feet.

1420. Lower Little River near All Healing Springs, N. C.

Location.--35°57', long 81°14', on left bank at upstream side of highway bridge, 0.3 mile downstream from Grassy Creek, 0.4 mile upstream from Lambert Creek, 2.2 miles northeast of All Healing Springs, and 4 miles northwest of Taylorsville, Alexander County.

Drainage area.--31.2 sq mi.

Records available.--October to December 1952 (monthly discharge only), January 1953 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 1,070 ft (by barometer). Prior to June 13, 1953, wire-weight gage at same site and datum.

Average discharge.--8 years (1952-60), 33.3 cfs.

Extremes.--1953-60: Maximum discharge, 2,550 cfs Apr. 28, 1958 (gage height, 13.94 ft); minimum, 2.9 cfs Sept. 20, 21, 1955.

Remarks.--Slight diurnal fluctuation at low flows during the growing season.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	11	14	15	28.7	50.9	56.9	28.1	20.9	39.1	18.5	11.1	11.4	25.3
1954	9.42	10.5	19.9	49.8	32.0	38.5	30.2	24.0	15.8	9.11	7.85	4.75	21.0
1955	6.04	13.2	18.5	14.5	28.1	26.2	54.2	19.0	18.6	12.7	9.60	5.27	18.7
1956	6.54	7.03	8.16	9.36	22.4	21.1	47.2	16.4	10.1	10.6	4.86	15.9	14.9
1957	14.9	12.7	27.2	26.1	53.7	36.6	73.9	24.0	78.6	26.3	24.1	48.0	36.9
1958	33.0	68.4	57.6	58.7	59.6	63.2	137	81.2	44.6	30.7	28.7	17.2	56.5
1959	18.9	18.1	37.9	33.8	27.8	36.2	68.8	35.6	30.5	19.8	22.3	76.9	35.5
1960	59.9	33.5	50.5	56.2	134	89.8	97.6	51.7	30.8	24.4	32.2	31.5	57.4

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	0.41	0.50	0.54	1.06	1.70	2.10	1.00	0.77	1.40	0.68	0.41	0.41	10.98
1954	.35	.38	.74	1.84	1.07	1.42	1.08	.89	.57	.34	.29	.17	9.14
1955	.22	.47	.68	.54	.94	.97	1.94	.70	.66	.47	.35	.19	8.13
1956	.24	.25	.30	.35	.78	.78	1.69	.61	.36	.39	.18	.57	6.50
1957	.55	.45	1.01	.96	1.79	1.35	2.64	.89	2.81	.97	.89	1.72	16.03
1958	1.22	2.45	2.13	2.17	1.99	2.34	4.88	3.00	1.60	1.13	1.06	.61	24.58
1959	1.70	.65	1.40	1.25	.93	1.34	2.46	1.31	1.09	.73	.82	2.75	15.43
1960	2.21	1.20	1.87	2.08	4.63	3.32	3.48	1.91	1.10	.90	1.19	1.13	25.03

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	1333	662	Feb. 21, 1953	7.2	25.3	0.811	10.98	25.3	11.00
1954	1333	1,040	Jan. 22, 1954	3.6	21.0	.673	9.14	20.8	9.04
1955	1383	607	Apr. 14, 1955	3.1	18.7	.599	8.13	17.4	7.55
1956	1433	706	Apr. 16, 1956	3.3	14.9	.478	6.50	17.7	7.72
1957	1503	1,160	June 22, 1957	7.5	36.9	1.18	16.03	45.6	19.82
1958	1553	2,550	Apr. 28, 1958	14	56.5	1.81	24.58	49.5	21.53
1959	1623	1,350	Sept. 30, 1959	14	35.5	1.14	15.43	41.3	17.96
1960	1703	1,110	Feb. 5, 1960	18	57.4	1.84	25.03	-	-

1424.41. Lookout Shoals Lake near Catawba, N. C.

Location.--Lat 35°46', long 81°06', at dam on Catawba River, 4 miles upstream from bridge on U.S. Highways 64 and 70 and 4½ miles north of Catawba, Catawba County.

Drainage area.--1,449 sq mi.

Records available.--December 1915 to September 1960.

Gage.--Float gage and indicator. Datum of gage is 738.1 ft (revised) above mean sea level, datum of 1929 (levels by Duke Power Co.).

Remarks.--Lake used for hydroelectric power development was first put in use Dec. 2, 1915. Total capacity was originally 1,355,195,160 cu ft, but has been reduced by silting. Usable capacity between gage heights 90.0 and 100.0 ft (crest of spillway), 473,976,360 cu ft by capacity table used prior to October 1957 and 388,300,000 cu ft by capacity table used since October 1957. Figures given herein represent usable contents. Records not previously published; changes in contents, equivalent in cubic feet per second, of a group of reservoirs including this one, have been published since October 1935. Flood of July 16, 1916, washed out an earth dike.

Cooperation.--Records furnished by Duke Power Co.

Contents, in millions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1916	-	-	506	501	405	25	141	276	232	(a)	(a)	(a)
1917	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1918	453	437	437	682	337	337	453	368	281	604	442	261
1919	610	620	555	528	588	539	432	539	593	501	560	421
1920	400	523	181	550	588	582	523	337	421	204	626	637
1921	453	610	598	604	544	400	620	474	442	463	55	458
1922	637	363	363	394	358	506	610	458	426	469	400	384
1923	384	168	544	523	352	316	506	604	373	261	218	490
1924	168	539	432	400	577	474	528	550	544	421	432	648
1925	437	506	421	421	496	421	479	384	442	405	80	490
1926	405	421	394	528	490	453	479	389	426	453	416	332
1927	368	358	400	479	389	426	474	469	453	442	363	516
1928	237	363	252	394	453	286	394	474	281	426	474	512
1929	469	379	316	218	321	559	560	512	368	458	442	242
1930	517	555	615	523	479	410	405	379	352	218	405	421
1931	496	453	311	469	368	363	517	384	416	384	437	347
1932	405	271	358	512	448	517	332	368	326	326	384	337
1933	296	271	659	410	421	458	400	496	223	311	163	394
1934	394	223	373	384	352	368	421	368	311	379	469	326
1935	437	469	337	550	426	593	593	421	368	416	368	204
1936	326	276	416	453	394	379	426	389	271	195	363	316
1937	373	190	400	610	311	421	306	321	306	252	442	209
1938	490	421	358	379	218	306	291	316	389	368	159	242
1939	242	347	237	316	610	394	237	261	172	286	296	213
1940	296	301	326	332	394	321	332	266	337	321	665	345
1941	326	316	311	379	332	337	342	394	190	316	352	311
1942	352	271	342	416	368	410	347	286	384	394	384	400
1943	365	291	512	496	410	316	373	421	394	373	352	316
1944	368	389	363	316	400	571	373	363	405	373	218	517
1945	373	394	368	394	405	400	410	373	332	368	321	342
1946	405	389	512	389	321	394	368	416	442	394	286	332
1947	301	266	363	384	342	373	384	342	342	421	363	358
1948	394	368	400	332	301	550	363	342	342	316	384	416
1949	337	528	528	332	342	256	394	368	306	316	544	523
1950	566	432	291	271	321	291	316	311	296	286	286	218
1951	337	256	363	256	311	291	332	237	213	347	363	247
1952	342	281	223	352	306	384	237	281	261	252	281	271
1953	276	306	200	301	237	405	342	394	363	332	218	261
1954	291	242	266	242	291	232	296	172	242	301	256	389
1955	363	252	256	223	242	228	252	286	213	342	326	342
1956	332	311	311	316	301	337	311	326	311	363	326	352
1957	358	358	358	358	421	352	394	358	368	368	368	b353
1958	272	235	256	204	280	323	420	302	306	323	297	302
1959	302	318	353	293	293	336	314	285	323	318	302	513
1960	362	327	289	344	357	484	323	302	276	323	336	518

a Water surface below gage height 90.0 ft which is the lower limit of usable contents.

b Contents by capacity table used prior to October 1957; contents Sept. 30, 1957, by capacity table used beginning October 1957, was 297 million cubic feet.

1425. Catawba River at Catawba, N. C.

Location.--Lat 35°43', long 81°04', on right bank at downstream side of bridge on U.S. Highway 70, half a mile upstream from Lyle Creek, five-eighths of a mile upstream from Southern Railway bridge, and 1 mile northeast of Catawba, Catawba County. Records include flow of Lyle Creek.

Drainage area.--1,535 sq mi, includes that of Lyle Creek.

Records available.--July 1896 to December 1899; June 1900, April 1901 to April 1902 (gage heights only); July 1900 to March 1901 (monthly discharge only, published in WSP 1303); November 1934 to June 1935 (fragmentary); July 1935 to September 1960. Records of discharge for April to December 1901, published in WSP 65 and 75, have been found unreliable and should not be used.

Gage.--Water-stage recorder. Datum of gage is 746.49 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 1896 to December 1899, June 1900 to April 1902, wire-weight gage at bridge five-eighths of a mile downstream at different datum.

Average discharge.--28 years (1896-99, 1935-60), 2,318 cfs (unadjusted).

Extremes.--1896-1901, 1934-60: Maximum discharge, 177,000 cfs Aug. 14, 1940 (gage height, 38.8 ft, from floodmarks), from rating curve extended above 24,000 cfs on basis of computation by Duke Power Co. of peak flow over dam; minimum, 85 cfs Sept. 15, 1957; minimum daily, 89 cfs Sept. 15, 1957.

Maximum stage known, 44.1 ft July 16, 1916, affected by failure of earth dike at Lookout Shoals Dam 4 miles above station, from information furnished by State Highway and Public Works Commission.

Remarks.--Flow regulated by Lake James since May 1919, Rhodhiss Lake since February 1925, Lake Hickory since April 1928, and Lookout Shoals Lake since December 1915; combined usable capacity of four lakes is 18,065,500,000 cu ft. Records of chemical analyses and water temperatures for the period October 1954 to September 1955, are published in report of the Geological Survey.

Correction.--In WSP 1303, the date for the momentary maximum discharge for 1945 is listed in error; it should be Sept. 18, 1945.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,134	2,287	2,644	2,856	3,026	2,035	2,008	2,130	1,608	1,137	1,360	1,106	2,022
1952	1,079	1,185	1,186	1,508	2,412	5,430	2,858	2,079	1,859	1,682	1,347	1,597	2,026
1953	1,625	1,322	1,128	1,243	2,621	3,545	2,005	1,630	1,472	1,256	1,274	1,090	1,879
1954	814	1,131	1,356	2,546	2,257	2,880	2,034	2,493	2,239	1,189	1,475	802	1,765
1955	485	750	857	758	1,376	1,325	1,960	1,099	1,159	1,445	1,932	1,337	1,205
1956	677	962	656	784	1,516	1,302	2,329	1,346	878	752	920	988	1,088
1957	1,466	1,753	1,280	1,815	3,275	2,796	5,720	1,878	5,246	1,956	1,401	2,140	2,542
1958	2,792	3,204	3,414	3,908	3,503	2,772	4,963	4,753	2,323	2,104	1,753	1,454	3,076
1959	1,595	1,230	1,938	2,026	1,501	1,787	2,943	1,866	2,335	1,558	1,495	3,205	1,955
1960	4,744	3,261	2,933	2,689	5,599	4,319	5,541	2,876	2,080	1,728	3,012	2,659	3,442

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted a/			Observed		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	2,166	2,164	19.14
1951	1203	9,460	Dec. 9, 1950	118	2,022	1,839	1.20	16.29	1,718	1,671	14.80
1952	1233	22,800	Mar. 11, 1952	115	2,026	2,027	1.32	17.97	2,079	1,937	17.15
1953	1273	16,000	Feb. 22, 1953	101	1,679	1,764	1.15	15.61	1,612	1,743	15.41
1954	1333	35,500	Jan. 22, 1954	115	1,765	1,539	1.00	13.62	1,665	1,490	13.18
1955	1383	5,650	Apr. 14, 1955	122	1,205	1,385	.902	12.24	1,221	1,371	12.12
1956	1433	7,020	Sept. 26, 1956	105	1,088	1,150	.749	10.20	1,273	1,356	12.02
1957	1503	36,700	Apr. 6, 1957	89	2,542	2,570	1.67	22.73	2,955	2,973	26.33
1958	1553	20,200	Apr. 28, 1958	98	3,076	3,018	1.97	26.74	2,687	2,606	23.08
1959	1623	16,200	Dec. 29, 1958	100	1,955	2,076	1.35	18.32	2,474	2,476	21.86
1960	1703	19,500	Feb. 5, 1960	116	3,442	3,330	2.17	29.54	-	-	-

a Adjusted for change in contents in Lake James, Rhodhiss Lake, Lake Hickory, and Lookout Shoals Lake.

1426. Mountain Creek near Terrell, N. C.

Location.--Lat 35°34', long 81°00', on right bank 280 ft upstream from highway bridge, a quarter of a mile downstream from Reed Creek, 1.7 miles southwest of Terrell, Catawba County, and 2½ miles upstream from mouth.

Drainage area.--42.4 sq mi.

Records available.--October 1957 to September 1960. Occasional low-flow measurements, 1956-57.

Gage.--Water-stage recorder. Datum of gage is 701.6 ft above mean sea level (Duke Power Co. contour reference mark). Prior to Dec. 16, 1958, staff and crest-stage gages. Dec. 16, 1958, to Jan. 29, 1959, water-stage recorder at site 220 ft upstream at datum 0.52 ft higher.

Extremes.--1957-60: Maximum discharge, 3,130 cfs Nov. 19, 1957 (gage height, 13.18 ft, from floodmarks, at site and datum then in use); minimum observed, 15 cfs Sept. 9-12, 19, 20, Oct. 6-20, 1958.

The flood in August 1940 reached a stage of about 19½ ft (present datum) at highway bridge 280 ft downstream, from information by local resident. A discharge of 5.9 cfs was measured on Aug. 30, 1956.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	28	140	68.1	56.4	60.5	61.9	167	108	39.2	33.1	21.8	17.1	66.5
1959	17.1	20.7	52.6	43.4	53.2	56.1	89.5	38.0	44.7	28.0	74.7	80.9	49.6
1960	87.8	40.4	55.4	89.2	165	118	100	60.4	43.6	39.0	32.6	36.8	72.0

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	0.76	3.69	1.85	1.53	1.48	1.68	4.39	2.93	1.03	0.90	0.59	0.45	21.28
1959	.47	.54	1.43	1.18	1.31	1.53	2.36	1.03	1.18	.71	2.03	2.13	15.90
1960	2.39	1.06	1.51	2.43	4.19	3.21	2.64	1.64	1.15	1.06	.89	.97	23.14

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1958	1553	3,130	Nov. 19, 1957	15	66.5	1.57	21.28	54.5	17.42
1959	1623	2,160	Apr. 21, Aug. 4	15	49.6	1.17	15.90	57.5	18.42
1960	1703	2,440	Feb. 5, 1960	23	72.0	1.70	23.14	-	-

1426.76. Mountain Island Lake near Mount Holly, N. C.

Location.--Lat 35°20'03", long 80°59'12", at dam on Catawba River, 1½ miles downstream from bridge on State Highway 16 and 3 miles northeast of Mount Holly, Gaston County.

Drainage area.--1,860 sq mi, approximately.

Records available.--December 1923 to September 1960.

Gage.--Float gage and indicator. Datum of gage is 547.6 ft (revised) above mean sea level, datum of 1929 (levels by Duke Power Co.).

Remarks.--Lake used for hydroelectric power development and was first put into operation Dec. 16, 1923. Total capacity, 2,495,988,000 cu ft at gage height 100.0 ft (crest of spillway) of which 1,132,000,000 cu ft between gage heights 90.0 and 100.0 ft is usable capacity. Prior to 1952, total capacity was 1,825,991,640 cu ft at gage height 100.0 ft, of which 1,132,000,000 cu ft between gage heights 90.0 and 100.0 ft was usable capacity. Figures given herein represent total contents prior to October 1945, and usable contents thereafter.

Cooperation.--Records furnished Duke Power Co.

Contents, in millions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1924	-	-	131	1,072	1,052	988	1,569	1,663	1,105	1,345	958	2,264
1925	1,443	712	908	1,532	988	685	721	532	476	374	298	409
1926	604	584	588	1,430	1,812	1,418	1,193	978	774	703	1,052	416
1927	516	958	1,094	712	1,193	1,171	1,116	1,062	1,116	1,138	1,182	918
1928	908	840	1,274	1,127	1,406	1,138	1,544	1,149	1,357	898	1,597	1,826
1929	1,193	792	783	676	2,013	1,839	1,744	1,716	1,418	1,262	1,285	1,381
1930	1,785	1,758	1,853	1,597	1,532	1,506	1,041	868	792	1,182	1,216	1,689
1931	1,138	1,010	968	1,083	1,160	988	1,052	1,569	774	765	878	878
1932	918	1,072	1,262	1,649	1,369	918	1,052	694	694	830	604	703
1933	1,297	1,610	2,058	1,481	1,468	1,443	1,557	1,357	938	999	878	1,062
1934	958	938	958	918	1,297	1,689	1,406	1,250	999	821	908	1,182
1935	968	1,182	1,216	1,623	1,182	1,940	1,393	1,171	1,250	1,072	1,369	765
1936	1,062	928	978	928	1,468	1,381	1,610	1,506	1,345	1,455	1,381	1,393
1937	1,532	1,116	1,494	1,969	1,663	1,285	1,381	1,443	1,285	1,557	1,239	1,204
1938	1,812	918	978	1,094	1,171	1,481	1,116	1,239	1,333	1,610	948	858
1939	978	1,193	1,430	1,193	1,882	1,569	1,274	958	1,204	1,785	988	1,406
1940	1,216	1,430	1,532	999	1,116	1,357	1,285	1,228	1,455	1,262	2,104	1,105
1941	1,204	1,297	1,430	1,204	1,127	1,506	1,569	1,455	1,583	1,519	1,532	1,160
1942	1,321	1,321	1,455	1,649	1,689	1,494	1,393	1,418	1,455	1,455	1,481	1,321
1943	1,481	1,204	1,799	1,812	1,406	1,239	1,406	1,228	1,309	1,430	1,138	1,228
1944	1,369	1,274	1,430	1,083	1,138	1,730	1,730	1,116	1,285	1,285	1,127	2,120
1945	1,333	1,309	1,544	1,393	1,357	1,309	1,297	1,116	1,138	1,532	898	al,557
1946	287	652	1,062	558	318	835	687	652	676	479	570	628
1947	468	798	468	822	402	652	873	1,006	664	593	1,034	652
1948	926	939	835	873	1,062	1,118	628	835	900	992	676	873
1949	848	1,244	913	524	822	1,020	900	616	664	798	1,258	402
1950	1,006	381	748	676	501	711	785	785	435	652	479	835
1951	628	402	558	413	687	772	822	490	593	873	711	1,048
1952	687	616	980	952	926	780	798	926	873	512	980	676
1953	676	735	772	760	992	772	785	966	926	582	760	748
1954	687	604	687	913	798	628	676	490	628	760	676	966
1955	980	810	810	676	760	785	835	798	748	676	616	723
1956	723	687	748	664	699	772	676	735	822	835	628	835
1957	652	676	760	873	699	873	711	848	848	810	687	835
1958	536	1,048	593	582	699	632	1,090	687	748	676	798	664
1959	699	810	1,104	699	785	697	628	822	735	640	822	1,160
1960	711	604	664	1,146	980	1,230	785	699	687	785	723	604

a Total contents; usable contents Sept. 30, 1945, was 860 million cubic feet.

1430. Henry Fork near Henry River, N. C.

Location.--35°41', long 81°24', on left bank 450 ft downstream from highway bridge, at site of Old Link Ford, 1½ miles downstream from Burke-Catawba County line, and 2 miles southeast of village of Henry River, Burke County.

Drainage area.--80 sq mi, approximately.

Records available.--1971 1925 to November 1931, December 1941 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 890.99 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 1925 to November 1931, at site 450 ft upstream at same datum.

Average discharge.--24 years (1925-31, 1942-60), 127 cfs.

Extremes.--1925-31, 1941-60: Maximum discharge, 15,300 cfs Oct. 2, 1929 (gage height, 18.40 ft, site then in use), from rating curve extended above 2,300 cfs on basis of computation of peak flow over dam at Henry River, at gage height 29.2 ft; minimum, 3 cfs Dec. 20, 1942; minimum daily, 4 cfs Nov. 15, Dec. 20, 1942.

Maximum stage known, 29.2 ft Aug. 13, 1940, at former site from floodmarks (discharge, 31,300 cfs). The flood of July 16, 1916, reached a stage of about 23 ft at former site (discharge, 20,700 cfs from computation of peak flow over dam of Henry River).

Remarks.--Considerable diurnal fluctuation and some regulation caused by mill above station. An average of about 2 cfs was diverted for water supply by town of Morganton and Broughton Memorial Hospital and discharged into Catawba River. Records of chemical analyses for the period October 1953 to September 1954 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	66.8	56.0	185	59.7	141	128	130	75.7	128	82.3	64.2	40.3	96.0
1952	28.7	46.7	160	122	210	414	178	112	84.8	61.6	124	61.0	134
1953	52.4	52.9	68.6	154	237	282	127	88.6	97.8	49.5	77.5	126	117
1954	52.9	49.1	121	282	182	224	170	139	75.0	43.0	43.6	25.4	117
1955	26.5	40.4	63.3	48.3	142	77.2	122	86.2	60.7	51.8	39.9	31.1	65.2
1956	43.0	35.6	31.1	32.3	147	86.4	184	88.0	46.4	109	47.2	58.0	75.2
1957	59.8	62.9	88.4	112	243	169	287	127	192	84.7	64.7	173	137
1958	128	247	175	215	207	211	594	276	140	107	78.7	62.6	186
1959	62.6	55.8	164	112	92.7	121	190	109	120	91.8	69.1	139	115
1960	264	128	158	198	473	348	351	181	129	100	96.3	91.4	209

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.96	0.78	2.67	0.86	1.84	1.85	1.81	1.06	1.78	1.19	0.92	0.56	16.28
1952	.41	.65	2.31	1.76	2.83	5.97	2.48	1.61	1.18	.89	1.79	.85	22.73
1953	.76	.74	.99	2.21	3.09	4.07	1.77	1.28	1.36	.71	1.12	1.75	19.85
1954	.76	.69	1.74	4.06	2.37	3.22	2.36	2.01	1.02	.62	.63	1.35	19.83
1955	.58	.56	.91	.70	1.85	1.11	1.70	1.24	.85	.75	.58	.43	11.06
1956	.62	.50	.45	.47	1.98	1.24	2.56	1.27	.65	1.57	.68	.81	12.80
1957	.86	.88	1.27	1.61	3.16	2.43	4.00	1.83	2.68	1.22	.93	2.41	23.28
1958	1.81	3.44	2.52	3.10	2.69	3.04	5.49	3.98	1.95	1.54	1.13	.87	31.56
1959	.90	.78	2.56	1.61	1.21	1.74	2.65	1.57	1.68	1.32	1.00	2.78	19.60
1960	3.81	1.79	2.28	2.86	6.38	5.01	4.90	2.61	1.80	1.45	1.39	1.27	35.55

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1950	-	-	-	-	-	-	-	107	18.07		
1951	1203	4,870	Dec. 7, 1950	6	96.0	1.20	16.28	89.9	15.24		
1952	1235	5,350	Mar. 11, 1952	6	134	1.68	22.73	128	21.85		
1953	1273	3,420	Aug. 19, 1953	7.2	117	1.46	19.85	121	20.55		
1954	1353	6,500	Jan. 22, 1954	7.2	117	1.46	19.83	109	18.49		
1955	1383	2,660	Feb. 6, 1955	5.6	65.2	.815	11.06	63.5	10.78		
1956	1433	2,480	Apr. 16, 1956	4.9	75.2	.940	12.80	83.7	14.24		
1957	1503	3,360	Apr. 5, 1957	8.7	137	1.71	23.28	165	28.04		
1958	1553	3,560	Apr. 6, 1958	6.2	186	2.32	31.56	164	27.83		
1959	1623	5,350	Sept. 30, 1959	11	115	1.44	19.60	138	23.44		
1960	1703	5,590	Feb. 5, 1960	21	209	2.61	35.55	-	-		

1435. Indian Creek near Laboratory, N. C.

Location.--Lat 35°25'20", long 81°15'50", on left bank 250 ft upstream from remains of Rudisill Mill dam, half a mile upstream from highway bridge, 1½ miles upstream from mouth, 1½ miles south of Laboratory, Lincoln County, and 3½ miles south of Lincolnton.

Drainage area.--68.4 sq mi.

Records available.--August 1951 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 736 ft (by barometer).

Average discharge.--9 years (1951-60), 85.8 cfs.

Extremes.--1951-60: Maximum discharge, 5,030 cfs Mar. 4, 1952 (gage height, 8.74 ft), from rating curve extended above 3,900 cfs on basis of computation of peak flow over dam; minimum, 4.6 cfs Oct. 8, 1954.

Peak discharge of flood in October 1929 was 9,920 cfs (the maximum discharge known); flood in July 1916, 7,840 cfs; flood in August 1940, 6,000 cfs. Discharge based on computations of peak flow over dam 1 mile downstream, using information by local resident.

Remarks.--Records of chemical analyses for the period October 1951 to September 1952, and water temperatures for the period January 1953 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	28.8	-
1952	20.2	33.6	167	114	116	424	84.5	54.6	49.0	32.3	133	64.7	108
1953	33.5	33.4	44.6	112	162	124	68.2	53.1	60.3	35.3	28.8	28.3	64.7
1954	21.8	24.4	70.7	219	71.4	118	75.2	52.8	33.1	19.6	14.7	8.62	60.9
1955	8.30	19.2	31.8	33.8	74.8	60.5	77.5	77.5	36.1	45.5	28.5	14.8	42.2
1956	60.4	27.5	26.0	25.8	151	81.5	125	52.4	28.6	39.6	13.7	65.9	57.6
1957	49.6	43.0	65.7	61.2	178	115	104	56.6	164	37.3	39.1	85.2	82.2
1958	69.2	272	96.8	119	135	132	301	151	77.6	110	71.1	45.0	131
1959	41.5	39.0	144	91.1	98.6	107	169	78.6	63.2	50.5	62.1	155	91.3
1960	187	79.2	99.6	137	309	223	175	94.5	79.4	81.5	82.2	65.5	134

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	0.47	-
1952	0.34	0.55	2.81	1.92	1.83	7.14	1.38	0.92	0.80	0.54	2.25	1.05	21.53
1953	.56	.54	.75	1.68	2.47	2.10	1.11	.90	.98	.60	.49	.46	12.84
1954	.37	.40	1.19	3.69	1.09	1.98	1.23	.89	.54	.53	.25	.14	12.10
1955	.14	.51	.54	.57	1.14	1.02	1.26	1.31	.59	.77	.48	.24	8.37
1956	1.02	.45	.44	.43	2.37	1.37	2.05	.88	.47	.67	.23	1.07	11.45
1957	.84	.70	1.11	1.03	2.70	1.94	1.69	.95	2.67	.63	.66	1.39	16.31
1958	1.17	4.44	1.63	2.00	2.06	2.22	4.91	2.54	1.27	1.86	1.20	.73	26.03
1959	.70	.64	2.42	1.54	1.50	1.80	2.76	1.33	1.03	.85	1.05	2.52	18.14
1960	3.16	1.29	1.68	2.32	4.87	3.76	2.86	1.59	1.30	1.37	1.39	1.07	26.66

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	-	-	-
1951	1233	-	-	a20	-	-	-	-	-	-
1952	1233	5,030	Mar. 4, 1952	17	108	1.58	21.53	99.0	19.68	
1953	1273	1,400	Feb. 21, 1953	15	64.7	.946	12.84	65.2	12.95	
1954	1333	3,950	Jan. 23, 1954	6.1	60.9	.890	12.10	56.0	11.13	
1955	1383	630	Apr. 14, 1955	5.2	42.2	.617	8.37	46.8	9.29	
1956	1433	1,450	Apr. 16, 1956	6.4	57.6	.842	11.45	61.3	12.19	
1957	1503	2,220	Feb. 1, 1957	20	82.2	1.20	16.31	105	20.90	
1958	1553	3,750	Nov. 19, 1957	34	131	1.92	26.03	114	22.55	
1959	1623	3,080	Dec. 29, 1958	31	91.3	1.33	18.14	103	20.51	
1960	1703	b2,440	Feb. 6, 1960	41	134	1.96	26.66	-	-	

a Minimum day during period Aug. 21 to Sept. 30.

b Maximum peak discharge; maximum discharge during year, 2,530 cfs at 12:01 a.m. Oct. 1, stage falling.

1440. Long Creek near Bessemer City, N. C.

Location.--Lat 35°18'20", long 81°14'00", on right bank 700 ft upstream from highway bridge, 2 miles northeast of Bessemer City limits, Gaston County, and 8½ miles upstream from mouth.

Drainage area.--31.4 sq mi.

Records available.--October 1952 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 706.1 ft above mean sea level, datum of 1929.

Average discharge.--8 years (1952-60), 32.0 cfs.

Extremes.--1952-60: Maximum discharge, 5,290 cfs Nov. 19, 1957 (gage height, 8.26 ft), from rating curve extended above 1,100 cfs on basis of contracted-opening measurement of peak flow; minimum, 0.4 cfs Oct. 7, 1954; minimum daily, 0.8 cfs Oct. 7, 1954.

Remarks.--Bessemer City diverts out of the basin for water supply an average of from 1 to 1.5 cfs causing diurnal fluctuation at low flow.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	*13.0	*14.0	*18.4	51.0	74.1	56.5	27.9	21.1	29.6	11.0	8.32	6.99	*27.4
1954	6.40	7.09	23.6	66.0	40.5	59.2	34.6	18.4	10.0	5.58	5.58	1.99	23.2
1955	2.37	7.19	12.9	14.1	44.1	22.8	34.3	38.4	11.2	7.46	5.29	2.93	16.7
1956	28.0	7.45	7.37	8.17	58.1	42.3	61.9	29.9	13.4	15.8	4.85	27.6	24.4
1957	11.2	19.1	20.4	20.5	71.8	41.6	31.9	22.3	16.1	7.30	10.9	12.0	23.4
1958	16.1	128	33.0	41.2	48.3	46.3	142	52.8	24.0	53.3	39.0	17.6	53.2
1959	16.2	15.5	45.1	39.1	45.2	59.9	71.4	29.5	17.8	22.0	33.6	*48.6	*36.8
1960	46.2	32.4	41.1	74.3	*131	68.6	60.0	37.9	27.4	19.3	16.5	28.2	*49.9

* Revised.

* Not previously published; partly estimated on basis of records for Indian Creek near Laboratory.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	*0.48	*0.50	*0.68	1.87	2.46	2.07	0.99	0.78	1.05	0.40	0.31	0.25	*11.84
1954	.23	.25	.87	2.42	1.34	2.17	1.23	.68	.36	.20	.20	.07	10.02
1955	.09	.26	.47	.52	1.46	.84	1.22	1.41	.40	.27	.19	.10	7.23
1956	1.03	.26	.27	.30	2.00	1.55	1.84	1.10	.47	.58	.18	.98	10.56
1957	.41	.68	.75	.75	2.38	1.53	1.13	.82	.57	.27	.40	.43	10.12
1958	.59	4.55	1.21	1.51	1.60	1.70	5.04	1.94	.85	1.96	1.43	.62	23.00
1959	.59	.55	1.66	1.44	1.43	2.20	2.54	1.08	.63	.81	1.23	*1.73	*15.89
1960	1.70	1.15	1.51	2.73	*4.49	3.25	2.13	1.39	.98	.71	.61	1.00	*21.65

* Revised.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	1273	816	June 10, 1953	3.8	*27.4	*0.875	*11.84	26.7	11.53
1954	1333	980	Feb. 21, 1954	1.1	23.2	.739	10.02	22.0	9.49
1955	1383	1,040	May 21, 1955	.8	16.7	.532	7.23	18.5	7.97
1956	1433	1,020	Apr. 16, 1956	1.2	24.4	.777	10.56	25.0	10.84
1957	1503	722	Jan. 31, 1957	2.9	23.4	.745	10.12	33.8	14.63
1958	1553	5,290	Nov. 19, 1957	10	53.2	1.69	23.00	45.0	19.45
1959	1623	*1,180	(a)	7.7	*36.8	*1.17	*15.89	*40.4	*17.45
1960	1703	*1,660	Feb. 5, 1960	8.6	*49.9	*1.59	*21.65	-	-

* Revised.

* Not previously published.

a Dec. 28, 1958, Sept. 30, 1959.

1450. South Fork Catawba River at Lowell, N. C.

Location.--Lat 35°17'10" (revised), long 81°06'00" (revised), on right bank 50 ft north of private mill road, 120 ft downstream from Housers Creek, 1 mile north of Lowell, Gaston County, and 3 miles downstream from Long Creek.

Drainage area.--630 sq mi.

Records available.--January 1942 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 603.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--18 years (1942-60), 807 cfs.

Extremes.--1942-60: Maximum discharge, 22,000 cfs Sept. 19, 1945 (gage height, 16.98 ft); minimum, 25 cfs Sept. 27, Oct. 4, 1954 (gage height, 0.75 ft); minimum daily, 31 cfs Oct. 8, 1954.

The flood of Aug. 15, 1940, reached a stage of 21.33 ft, from floodmarks (discharge, 34,000 cfs, from rating curve extended above 18,000 cfs). Depth of flow over dam during the July 1916 flood at High Shoals 11 miles upstream was about 1 ft higher than that for 1940, from information by local resident.

Remarks.--Considerable diurnal fluctuation and slight regulation for short periods at low flow caused by powerplant above station. City of Gastonia diverted for water supply yearly averages ranging from 3 to 10 cfs. A part of the diversion is returned to Long Creek as sewage. For diversion by town of Morganton see Henry Fork near Henry River, and by Bessemer City see Long Creek near Bessemer City.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	377	324	646	390	691	725	824	419	417	376	500	248	495
1952	164	261	1,215	944	1,094	3,511	859	591	484	354	1,157	505	930
1953	313	332	407	972	1,392	1,355	640	522	622	319	335	430	632
1954	251	251	696	1,867	852	1,264	832	590	346	215	214	110	625
1955	104	215	365	372	893	561	813	654	363	319	259	148	418
1956	443	245	235	242	1,167	726	1,137	593	286	408	182	554	514
1957	395	391	596	506	1,665	1,100	1,159	666	1,170	418	299	684	745
1958	585	2,034	955	1,125	1,164	1,215	2,675	1,563	719	864	546	368	1,148
1959	363	357	1,113	904	855	946	1,321	679	665	529	701	1,011	786
1960	1,972	839	968	1,168	3,204	1,957	1,925	986	782	608	702	642	1,305

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.69	0.57	1.18	0.71	1.14	1.33	1.46	0.77	0.74	0.69	0.91	0.44	10.63
1952	.30	.50	2.22	1.73	1.87	6.42	1.52	1.08	.82	.61	2.12	.89	20.08
1953	.57	.59	.74	1.78	2.50	2.48	1.13	.96	1.10	.58	.61	.76	13.60
1954	.46	.44	1.27	3.42	1.41	2.31	1.47	1.08	.61	.39	.39	.20	13.45
1955	.19	.38	.67	.68	1.46	1.03	1.44	1.20	.64	.58	.47	.26	9.00
1956	.81	.43	.43	.44	2.00	1.33	2.01	1.09	.51	.75	.33	.98	11.11
1957	.72	.69	1.09	.93	2.75	2.01	2.05	1.22	2.07	.76	.55	1.21	16.05
1958	1.07	3.60	1.75	2.06	1.92	2.22	4.74	2.86	1.27	1.58	1.00	.65	24.72
1959	.66	.63	2.04	1.65	1.41	1.73	2.34	1.24	1.18	.97	1.28	1.79	16.92
1960	3.61	1.49	1.77	2.14	5.48	3.58	3.41	1.80	1.38	1.11	1.28	1.14	28.19

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean
		Discharge	Date					
1950	-	-	-	-	-	-	-	578
1951	1203	3,980	Aug. 14, 1951	140	493	0.793	10.63	†520
1952	1233	18,300	Mar. 4, 1952	92	930	1.48	20.08	878
1953	1273	8,190	Mar. 24, 1953	146	632	1.00	13.60	644
1954	1333	13,700	Jan. 23, 1954	38	625	.992	13.45	581
1955	1383	5,380	Feb. 7, 1955	31	418	.663	9.00	438
1956	1433	6,750	Apr. 16, 1956	43	514	.816	11.11	553
1957	1503	8,800	Feb. 2, 1957	198	745	1.18	16.05	927
1958	1553	13,900	Nov. 20, 1957	292	1,148	1.82	24.72	1,004
1959	1623	10,500	Dec. 29, 1958	237	786	1.25	16.92	950
1960	1703	11,700	Feb. 6, 1960	374	1,305	2.07	28.19	-

† Corrected.

1460. Catawba River near Rock Hill, S. C.

Location.--Lat 34°59', long 80°58', on right bank at downstream side of bridge on U.S. Highway 21, 3½ miles downstream from Lake Wylie Dam (revised), 5 miles northeast of Rock Hill, York County, and 7½ miles upstream from Sugar Creek.

Drainage area.--3,050 sq mi, approximately.

Records available.--September 1895 to September 1903, April 1942 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Altitude of gage is 492 ft (by barometer). Sept. 23, 1895, to July 31, 1903, chain gage at Southern Railway bridge, 2 miles downstream, at different datum.

Average discharge.--26 years (1895-1903, 1942-60), 4,621 cfs.

Extremes.--1895-1903, 1942-60: Maximum discharge, 151,000 cfs May 23, 1901 (gage height, 24.15 ft, site and datum then in use); minimum, 143 cfs Apr. 25, 1943 (gage height, 2.59 ft); minimum daily, 490 cfs Oct. 21, 1954.

Remarks.--Flow regulated by Lake Wylie (usable capacity, 6,542,000,000 cu ft) and by other powerplants above station. Records of chemical analyses and water temperatures for the period October 1957 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,143	3,757	3,603	4,614	4,391	3,419	4,019	4,165	2,660	1,247	1,727	1,604	3,188
1952	1,580	1,833	3,083	3,452	5,286	13,430	5,214	3,536	3,259	2,944	2,792	4,039	4,205
1953	2,637	1,602	1,700	3,173	5,974	7,414	3,541	2,657	2,449	2,312	1,966	1,770	3,101
1954	1,507	1,242	3,015	6,325	4,630	6,352	4,393	3,859	2,930	1,384	1,460	998	3,171
1955	721	858	1,907	1,852	3,251	2,627	3,974	2,376	1,573	2,030	2,437	1,481	2,082
1956	1,896	1,254	1,042	1,415	4,277	5,523	4,842	3,191	1,216	1,239	1,291	1,629	2,223
1957	2,436	2,663	2,155	2,835	6,804	5,462	7,957	3,137	6,940	2,356	1,732	3,167	3,932
1958	3,749	6,686	5,934	6,270	5,441	5,531	10,410	6,383	3,693	3,547	2,742	1,958	5,354
1959	2,212	1,635	2,990	4,865	3,538	4,062	6,177	2,909	3,713	2,523	3,331	5,067	3,579
1960	9,715	4,912	5,261	5,322	13,230	9,145	10,680	5,336	3,608	2,745	4,862	3,649	6,511

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	3,556	-
1951	1203	13,600	Jan. 23, 1951	845	3,188	-	-	2,853	-
1952	1233	56,100	Mar. 4, 1952	860	4,205	-	-	4,158	-
1953	1273	38,900	Mar. 24, 1953	999	3,101	-	-	3,087	-
1954	1333	51,000	Jan. 23, 1954	865	3,171	-	-	2,979	-
1955	1383	14,200	Apr. 15, 1955	490	2,082	-	-	2,141	-
1956	1433	14,600	Apr. 16, 1956	528	2,223	-	-	2,479	-
1957	1503	36,100	Apr. 7, 1957	535	3,932	-	-	4,693	-
1958	1553	50,000	Apr. 28, 1958	592	5,354	-	-	4,561	-
1959	1623	25,100	Dec. 30, 1958	530	3,579	-	-	4,679	-
1960	1703	50,000	Feb. 6, 1960	518	6,511	-	-	-	-

Note.--Figures of discharge, in cubic feet per second per square mile, and runoff in inches, published in WSP 1203, may be subject to error because of regulation in reservoirs upstream. Those figures are not included in this report and should not be used.

1465. Little Sugar Creek near Charlotte, N. C.

Location.--Lat 35°09'13" (revised), long 80°51'18" (revised), on right bank 10 ft upstream from highway bridge at sewage-disposal plant of city of Charlotte, 1,500 ft downstream from Briar Creek, and 4.8 miles south of city hall in Charlotte, Mecklenburg County.

Drainage area.--41.0 sq mi (revised).

Records available.--July 1924 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 568.9 ft above mean sea level (city of Charlotte datum). Prior to Apr. 26, 1927, staff gage and Apr. 26, 1927, to Sept. 30, 1958, water-stage recorder at site 1,000 ft upstream at datum 2.7 ft higher. Concrete control prior to June 4, 1958.

Average discharge.--36 years (1924-60), 45.3 cfs.

Extremes.--1924-60: Maximum discharge, 8,370 cfs Apr. 6, 1936 (gage height, 16.2 ft, from floodmarks at site and datum then in use), from rating curve extended above 2,600 cfs on basis of slope-area and contracted-opening measurements of peak flow at gage heights 10.42, 11.47, 12.00, and 13.10 ft; minimum, 1.2 cfs Sept. 27, 1954.

Remarks.--During the period 1957-60, an unknown quantity of cooling and wash water, and prior to 1957 as much as 1.6 cfs of industrial sewage, diverted into the basin from Catawba River through city of Charlotte storm sewers. Records of chemical analyses for the period October 1956 to September 1958 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	15.2	11.4	19.8	15.0	19.4	48.4	53.0	137	22.3	14.6	15.9	36.8	23.8
1952	7.10	17.8	71.7	36.3	59.5	190	32.6	20.4	27.6	17.4	99.8	29.2	51.0
1953	10.5	14.7	39.6	53.7	125	96.3	36.3	36.6	23.7	8.19	19.4	13.1	39.2
1954	6.03	7.02	47.2	129	24.6	104	36.5	17.1	15.2	24.9	9.20	5.68	35.6
1955	13.1	11.8	35.6	30.0	84.8	28.0	99.2	48.3	15.6	39.1	44.8	12.2	38.2
1956	38.0	17.0	9.37	14.1	85.8	70.9	57.3	59.4	9.20	26.8	15.9	38.0	36.6
1957	16.3	10.6	37.2	20.9	94.1	52.8	57.6	41.6	42.5	9.46	9.30	16.0	33.6
1958	18.4	89.8	35.3	85.2	56.2	44.1	141	67.1	21.8	45.9	57.4	*7.81	55.7
1959	12.9	*11.2	33.3	40.5	55.9	57.3	94.1	53.8	*29.1	*79.2	63.0	110	53.2
1960	*110	41.6	51.8	124	174	112	83.6	59.1	*29.7	*17.1	65.1	14.6	*73.3

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.43	0.31	0.56	0.42	0.49	1.36	1.44	0.39	0.61	0.41	0.45	1.00	7.87
1952	.20	.48	2.02	1.02	1.57	5.34	.89	.57	.75	.49	2.81	.79	16.95
1953	.30	.40	1.11	1.51	3.17	2.71	.99	1.05	.65	.23	.55	.36	13.01
1954	.17	.19	1.33	3.82	.62	2.91	.99	.48	.41	.70	.28	.10	11.78
1955	.37	.32	1.00	.84	2.15	.79	2.70	1.36	.43	1.10	1.26	.33	12.65
1956	1.07	.46	.26	.40	2.26	1.99	1.56	1.67	.25	.75	.45	1.04	12.16
1957	.46	.29	1.05	.59	2.39	1.48	1.57	1.17	1.16	.27	.26	.44	11.13
1958	.52	2.44	.99	2.40	1.43	1.24	3.83	1.89	.59	1.29	1.61	.21	18.44
1959	.36	.30	.94	1.14	1.42	1.61	2.56	1.51	.79	2.23	1.77	2.98	17.61
1960	3.08	1.13	1.46	3.48	4.58	3.16	2.28	1.66	.81	.48	1.83	.40	24.35

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	1172	-	-	-	-	-	-	29.4	9.66
1951	1203	2,240	Sept. 25, 1951	3.0	23.8	0.580	7.87	28.0	9.27
1952	1233	4,360	Aug. 31, 1952	5.0	51.0	1.24	16.93	48.3	16.04
1953	1273	2,850	Feb. 20, 1953	4.6	39.2	.956	13.01	38.9	12.89
1954	1333	3,370	Jan. 22, 1954	2.0	35.6	.868	11.78	35.6	11.78
1955	1383	4,450	Apr. 14, 1955	2.0	38.2	.932	12.65	38.5	12.75
1956	1433	3,160	Mar. 16, 1956	3.4	36.6	.893	12.16	36.6	12.17
1957	1503	2,780	Apr. 5, 1957	2.0	33.6	.820	11.13	40.1	13.28
1958	1553	5,060	Aug. 2, 1958	*5.2	55.7	1.36	18.44	48.6	16.09
1959	1623	2,900	Aug. 29, 1959	*5	53.2	1.30	17.61	65.5	21.68
1960	1703	3,300	Oct. 10, 1959	5.9	*73.3	1.79	24.35	-	-

* Revised.

1475. Rocky Creek at Great Falls, S. C.

Location.--Lat 34°34', long 80°55', on left bank 350 ft downstream from Turkey Branch, 1 mile west of Great Falls, Chester County, and 1.6 miles upstream from mouth.

Drainage area.--194 sq mi.

Records available.--February 1951 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 299 ft (by barometer).

Average discharge.--9 years (1951-60), 173 cfs.

Extremes.--1951-60: Maximum discharge, 10,800 cfs Sept. 30, 1959 (gage height, 10.23 ft); minimum, 0.04 cfs Oct. 6-13, 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	66.6	158	234	45.7	18.2	47.4	36.4	25.4	-
1952	10.9	30.2	186	129	300	783	119	64.3	24.7	19.6	281	227	181
1953	32.6	37.9	101	295	592	379	155	211	29.2	13.0	18.0	34.9	156
1954	13.8	18.9	217	523	93.3	363	552	66.3	19.0	105	11.6	1.865	150
1955	2.11	10.8	30.8	113	271	49.6	566	78.2	17.6	69.7	209	52.5	104
1956	57.5	38.1	30.7	49.1	417	324	347	105	21.2	18.4	12.6	18.1	118
1957	16.4	16.8	40.6	59.8	97.0	217	327	132	66.9	15.3	4.46	28.1	84.8
1958	44.6	647	189	419	295	264	326	225	49.7	130	99.8	21.7	225
1959	33.4	27.9	99.7	123	326	300	258	48.3	117	679	192	572	230
1960	483	105	123	603	912	573	412	177	100	105	97.7	36.2	309

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	0.94	1.35	0.27	0.10	0.28	0.22	0.15	-
1952	0.06	0.17	1.11	0.77	1.67	4.66	.68	.38	.14	.12	1.67	1.30	12.73
1953	.19	.22	.60	1.75	3.18	2.25	.89	1.26	.17	.08	.11	.20	10.90
1954	.08	.11	1.29	3.11	.50	2.16	2.02	.39	.11	.62	.07	.005	10.46
1955	.01	.06	.18	.67	1.46	.30	2.11	.46	.10	.41	1.24	.30	7.30
1956	.34	.22	.18	.29	2.32	1.92	2.00	.62	.12	.11	.07	.10	8.29
1957	.10	.10	.24	.36	.52	1.29	1.89	.78	.38	.09	.03	.16	5.94
1958	.27	3.73	1.12	2.49	1.58	1.57	1.87	1.34	.29	.77	.59	12	15.74
1959	.20	.16	.59	.73	1.75	1.79	1.48	.29	.67	4.04	1.14	3.29	16.13
1960	2.87	.60	.73	3.58	5.07	3.40	2.36	1.05	.57	.62	.58	.21	21.64

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1233	-	-	-	-	-	-	-	-
1952	1233	8,880	Mar. 4, 1952	5.3	181	0.933	12.73	177	12.40
1953	1273	5,230	Feb. 21, 1953	2.3	156	.804	10.90	162	11.37
1954	1333	5,860	Jan. 17, 1954	.07	150	.773	10.46	132	9.24
1955	1383	6,180	Apr. 15, 1955	.04	104	.536	7.30	111	7.79
1956	1433	5,080	Mar. 17, 1956	.12	118	.608	8.29	114	7.99
1957	1503	4,290	Apr. 6, 1957	.08	84.8	1.437	5.94	152	10.62
1958	1553	5,600	Jan. 25, 1958	12	225	1.16	15.74	166	11.57
1959	1623	10,800	Sept. 30, 1959	14	230	1.19	16.13	277	19.38
1960	1703	86,910	Feb. 14, 1960	24	309	1.59	21.64	-	-

a Maximum peak discharge; maximum discharge during year, 8,720 cfs at 12:01 a.m. Oct. 1, stage falling.

1480. Wateree River near Camden, S. C.

Location.--Lat 34°14'40", long 80°39'15", in pier of bridge on U.S. Highway 1, 1,500 ft downstream from Twentyfivemile Creek, 4,000 ft upstream from Seaboard Air Line Railroad bridge, 2.2 miles west of Camden, Kershaw County, and 7.4 miles downstream from Wateree Dam.

Drainage area.--5,070 sq mi, approximately.

Records available.--January to December 1903 (gage heights only), October 1904 to September 1910, October 1929 to September 1960. Monthly discharge only for some periods, published in WSP 1303. Gage-height records collected at site $1\frac{1}{2}$ miles downstream 1891-1934, at site 830 ft upstream January 1935 to September 1942, and at present site since October 1942, are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 119.36 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. January 1903 to September 1910 staff or chain gage at site $1\frac{1}{2}$ miles downstream at datum about 1.65 ft lower. Oct. 1, 1929, to Sept. 1, 1942, water-stage recorder at site 830 ft upstream at present datum.

Average discharge.--37 years (1904-10, 1929-60), 6,189 cfs.

Extremes.--1903-10, 1929-60: Maximum discharge, 366,000 cfs Aug. 26, 1908 (gage height, 39.7 ft, site and datum then in use, from records of U.S. Weather Bureau), from rating curve extended above 122,000 cfs as explained below; minimum daily, 170 cfs June 3, 1941. Maximum stage known, 40.4 ft July 18, 1916, at site $1\frac{1}{2}$ miles downstream, from records of U.S. Weather Bureau (discharge, 400,000 cfs, from rating curve extended above 122,000 cfs on basis of computation, by Duke Power Co., of peak flow of 382,000 cfs over dam at Rocky Creek Reservoir).

Remarks.--Flow regulated since 1919 by powerplant at Wateree Reservoir (capacity, 7,626,000,000 cu ft) and subsequent to 1904 by other powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,213	5,137	4,679	5,337	5,920	4,622	5,732	5,027	2,879	1,514	2,307	1,321	3,960
1952	2,168	2,318	3,800	4,630	8,109	21,700	8,210	4,622	4,112	3,444	4,568	7,750	6,285
1953	3,529	2,032	2,262	5,762	10,510	11,500	4,584	5,007	2,333	3,072	2,168	2,276	4,557
1954	2,524	1,748	5,809	11,890	6,177	9,326	7,809	4,556	3,484	2,289	1,460	1,033	4,846
1955	1,095	2,184	3,240	3,436	6,507	3,568	8,103	3,508	1,848	2,957	3,920	2,154	3,519
1956	2,943	2,079	1,647	2,124	7,913	7,239	7,648	5,121	2,104	656	1,914	1,626	3,563
1957	3,406	3,519	2,417	3,829	8,630	8,231	10,260	5,315	8,544	2,527	1,904	3,621	5,441
1958	4,579	10,910	9,500	10,520	8,745	8,967	13,610	13,200	4,903	5,336	4,296	2,435	8,079
1959	2,967	2,053	3,659	7,778	7,400	7,479	8,877	3,853	4,963	7,961	5,590	7,760	5,932
1960	16,350	6,623	7,379	10,370	23,270	14,160	16,860	6,998	4,172	3,602	6,129	4,253	9,964

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	4,572	-
1951	1203	15,200	Apr. 11, 1951	182	3,960	-	-	3,565	-
1952	1233	82,900	Mar. 5, 1952	188	6,285	-	-	6,247	-
1953	1273	24,500	Feb. 24, 1953	179	4,557	-	-	4,750	-
1954	1333	67,000	Jan. 24, 1954	321	4,846	-	-	4,542	-
1955	1383	30,800	Apr. 16, 1955	336	3,519	-	-	3,532	-
1956	1433	16,800	Mar. 18, 1956	302	3,563	-	-	3,786	-
1957	1503	22,200	Apr. 10, 1957	230	5,141	-	-	6,450	-
1958	1553	36,800	Nov. 26, 1957	330	8,079	-	-	6,718	-
1959	1623	a17,500	July 11, 1959	230	5,952	-	-	7,761	-
1960	1703	58,600	Apr. 6, 1960	374	9,964	-	-	-	-

a Maximum independent peak discharge; maximum discharge during year, 18,300 cfs Sept. 30, 1959, was not independent of higher peak discharge occurring Oct. 2, 1959.

Location.--Lat 35°25'35", long 82°10'45", 1,000 ft downstream from Lake Lure Dam, 1.5 miles downstream from Buffalo Creek, and 3 miles east of Chimney Rock, Rutherford County.

Records available.--May 1907 to June 1909 (fragmentary, published as "at Uree"), March 1927 to September 1958. Monthly discharge only for some periods, published in WSP 1303.

Extremes.--1907-9, 1927-58: Maximum discharge, 26,000 cfs Aug. 15, 1928 (gauge height 16.8 ft), from rating curve extended above 4,200 cfs on basis of computation of peak flow over Lake Lure Dam at gauge heights 12.2 and 16.8 ft; minimum, 0.7 cfs Sept. 13, 1928 (gauge height, 0.26 ft); minimum daily, 0.8 cfs Sept. 13, 14, 24, 26, 1928.

Monthly and yearly mean discharge, in cubic feet per second

[illegible][illegible][illegible]

1490. Cove Creek near Lake Lure, N. C.

Location--Lat 35°25'24", long 82°06'42", on left bank 40 ft upstream from bridge on U.S. Highways 64 and 74, 1 mile upstream from mouth, and 5 miles east of town of Lake Lure, Rutherford County.

Drainage area--77.0 sq mi.

Records available--October 1950 to September 1960. Occasional low-flow measurements, 1949-51.

Gage--Water-stage recorder. Datum of gage is 815.4 ft above mean sea level, datum of 1929. Prior to Dec. 20, 1954, wire-weight gage at same site and datum.

Average discharge--10 years (1950-1960), 109 cfs.

Extremes--1951-60: Maximum discharge, 7,050 cfs June 5, 1957 (gage height, 18.53 ft), from rating curve extended above 4,100 cfs by logarithmic plotting; minimum, 21 cfs Sept. 8, 9, 28, 30, Oct. 1-3, 5-7, 11-13, 1954.

Flood in 1916 reached a stage of about 23 ft, from records of State Highway and Public Works Commission.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	112	84.0	220	84.6	127	187	152	94.5	86.8	69.5	52.3	50.5	110
1952	48.0	68.6	151	98.5	192	322	155	97.7	74.1	49.1	56.8	47.7	113
1953	48.9	66.8	63.9	107	165	195	103	95.5	83.8	47.8	46.2	52.3	89.1
1954	40.3	48.7	83.2	172	133	157	110	90.2	57.5	40.3	31.6	24.5	82.2
1955	24.5	33.1	62.1	41.6	84.8	74.1	156	112	67.7	75.5	85.2	44.8	71.6
1956	53.3	45.1	43.2	39.5	133	89.5	134	79.2	49.8	43.6	31.5	48.4	65.3
1957	49.3	48.4	66.8	76.1	134	111	300	99.9	282	88.4	60.5	111	118
1958	116	184	169	191	169	184	273	204	135	126	86.9	65.8	157
1959	67.2	62.7	102	108	86.9	107	164	149	111	94.8	76.5	145	106
1960	190	125	144	168	327	256	272	159	120	117	140	94.4	175

* Not previously published; estimated on basis of records for Catawba River near Marion and Second Broad River at Cliffside.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.68	1.22	3.29	1.27	1.71	2.80	2.21	1.42	1.26	1.04	0.78	0.73	19.41
1952	.72	.99	2.26	1.47	2.69	4.83	2.25	1.46	1.07	.74	.85	.69	20.02
1953	.73	.97	.96	1.60	2.23	2.92	1.49	1.43	1.21	.72	.69	.76	15.71
1954	.60	.71	1.25	2.58	1.80	2.35	1.59	1.35	.83	.60	.47	.35	14.48
1955	.37	.48	.93	.62	1.15	1.11	2.26	1.68	.98	1.13	1.28	.65	12.64
1956	.80	.65	.65	.59	1.86	1.34	1.93	1.19	.72	.65	.47	.70	11.55
1957	.74	.70	1.00	1.14	1.82	1.67	4.35	1.50	4.08	1.32	.91	1.61	20.84
1958	1.73	2.67	2.52	2.71	2.28	2.75	3.95	3.06	1.95	1.88	1.30	.92	27.72
1959	1.01	.91	1.53	1.62	1.18	1.60	2.38	2.24	1.61	1.42	1.15	2.10	18.75
1960	2.85	1.81	2.15	2.51	4.58	3.84	3.94	2.38	1.74	1.76	2.09	1.37	31.02

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1433	al, 030	Mar. 7, 1951	b36	110	1.43	19.41	97.5	18.91
1952	1433	4,400	Mar. 11, 1952	32	113	1.47	20.02	106	18.71
1953	1433	1,770	Mar. 23, 1953	26	89.1	1.16	15.71	88.5	15.61
1954	1433	3,180	Jan. 22, 1954	21	82.2	1.07	14.48	77.8	13.70
1955	1433	2,510	Apr. 14, 1955	21	71.6	.930	12.64	73.5	12.96
1956	1433	1,060	Apr. 16, 1956	25	65.3	.848	11.55	67.3	11.89
1957	1503	7,050	June 5, 1957	33	118	1.53	20.84	144	25.32
1958	1553	1,270	Apr. 6, 1958	57	157	2.04	27.72	138	24.25
1959	1623	2,230	Sept. 30, 1959	50	106	1.38	18.75	125	22.11
1960	1703	2,940	Feb. 5, 1960	75	175	2.27	31.02	-	-

* Not previously published.

a Maximum during period January to September.

b Minimum day during period January to September.

1500. Green River near Mill Spring, N. C.

Location--Lat 35°20'10", long 82°04'50", on right bank at abandoned ford 1.5 miles north-east of Pea Ridge Church, 2 miles downstream from Walnut Creek, 5.2 miles northeast of Mill Spring, Polk County, and 9 miles downstream from Turner Shoals Dam.

Drainage area--174 sq mi.

Records available--December 1939 to December 1954. All figures of discharge above 1,500 cfs prior to the water year 1949 except the 1946 maximum discharge, and discharge for Nov. 28, 29, 1948, Aug. 28, 29, Oct. 7, 1949, have been found to be unreliable and should not be used.

Gage--Water-stage recorder. Altitude of gage is 770 ft (by barometer).

Average discharge--14 years (1940-54), 387 cfs (revised).

Extremes--1939-54: Maximum gage height, 22.15 ft Aug. 13, 1940 (maximum discharge at gage not determined; figure previously published is unreliable); maximum discharge at Turner Shoals Dam (drainage area, 135 sq mi), 12,000 cfs Aug. 28, 1949, by computation of peak flow over dam; minimum and minimum daily, 25 cfs July 6, 1940 (gage height, 1.42 ft).

Maximum stage known, 24.2 ft in July 1916, from flood crest reference mark placed by local resident.

Remarks--Large diurnal fluctuation caused by powerplants above station; considerable regulation by Lake Summit and Lake Adger (combined usable storage, 338,875,000 cu ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	468	320	608	322	404	492	546	322	295	225	166	149	360
1952	136	195	534	372	575	1,145	614	395	254	222	176	200	401
1953	132	142	197	329	554	597	353	320	263	187	190	118	280
1954	98.9	125	332	621	374	419	377	307	212	129	141	122	271
1955	87.9	77.2	142	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	441	34.43
1951	1233	a7,150	Dec. 7, 1950	35	360	2.07	28.07	315	24.58
1952	1233	a6,760	Mar. 11, 1952	40	401	2.30	31.41	368	28.72
1953	1273	a4,180	Feb. 21, 1953	38	280	1.61	21.86	288	22.53
1954	1333	a8,800	Jan. 22, 1954	30	271	1.56	21.18	-	-

a Maximum discharge at Turner Shoals Dam, 9 miles upstream (drainage area, 135 sq mi); stage-discharge relation at gage indeterminate.

1510. Second Broad River at Cliffside, N. C.

Location.--Lat 35°14'08", long 81°45'57", on left bank a quarter of a mile downstream from dam at Cliffside Mills, at Cliffside, Rutherford County, and 1½ miles upstream from mouth.

Drainage area.--211 sq mi.

Records available.--June 1925 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 670 ft (by barometer).

Average discharge.--35 years (1925-60), 293 cfs.

Extremes.--1925-60: Maximum discharge, 15,000 cfs Aug. 14, 1940 (gage height, 17.93 ft), from rating curve extended above 9,100 cfs on basis of computation of peak flow over Cliffside Mills dam, minimum, 4 cfs Sept. 27, 1935, Aug. 3, 1937, July 24, 1943; minimum daily, 6 cfs June 9, 1940.

Remarks.--Considerable diurnal fluctuation and some regulation caused by mills above station. Records of chemical analyses and water temperatures for the period October 1956 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	210	163	456	188	307	392	324	187	237	170	176	113	243
1952	98.0	150	468	307	390	1,114	356	223	200	128	214	121	313
1953	114	133	174	315	516	407	207	200	183	104	97.2	248	223
1954	103	104	243	674	319	406	280	220	132	96.3	78.9	55.8	226
1955	57.4	99.2	132	129	267	169	257	220	124	151	132	86.7	151
1956	99.7	91.6	90.2	91.8	361	222	371	162	91.5	103	59.9	102	153
1957	86.2	104	161	154	438	305	532	186	556	144	153	299	257
1958	289	592	369	473	447	442	874	561	301	289	247	160	420
1959	162	159	327	307	276	307	435	337	359	303	223	379	298
1960	719	310	369	413	999	819	753	411	323	256	247	294	491

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.15	0.86	2.49	1.03	1.52	2.14	1.71	1.02	1.25	0.93	0.96	0.60	15.66
1952	.54	.79	2.56	1.68	1.99	6.09	1.78	1.22	1.06	.70	1.17	.64	20.22
1953	.62	.70	.95	1.72	2.55	2.23	1.09	1.09	.97	.57	.53	1.32	14.34
1954	.57	.55	1.33	3.68	1.57	2.22	1.48	1.20	.70	.53	.43	.30	14.56
1955	.31	.52	.72	.71	1.32	.92	1.36	1.20	.66	.82	.72	.46	9.72
1956	.54	.48	.49	.50	1.85	1.21	1.96	.88	.48	.56	.33	.54	9.82
1957	.47	.55	.88	.84	2.18	1.67	2.81	1.02	2.94	.79	.84	1.58	16.55
1958	1.58	3.13	2.02	2.59	2.21	2.42	4.62	3.06	1.59	1.58	1.35	.84	26.99
1959	.89	.84	1.79	1.68	1.36	1.68	2.30	1.84	1.90	1.66	1.22	2.01	19.17
1960	3.93	1.64	2.02	2.26	5.11	4.48	3.98	2.24	1.71	1.40	1.35	1.55	31.67

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	268	17.22
1951	1203	5,400	Dec. 8, 1950	26	243	1.15	15.66	234	15.05
1952	1233	5,480	Mar. 4, 1952	22	313	1.48	20.22	288	18.60
1953	1273	3,070	Feb. 22, 1953	15	223	1.06	14.34	225	14.52
1954	1333	6,670	Jan. 23, 1954	20	226	1.07	14.56	212	13.66
1955	1383	2,160	Feb. 7, 1955	10	151	.716	9.72	151	9.68
1956	1433	2,380	Apr. 16, 1956	12	153	.725	9.82	158	10.21
1957	1503	6,120	June 6, 1957	34	257	1.22	16.55	332	21.38
1958	1553	4,000	Apr. 7, 1958	91	420	1.99	26.99	370	23.78
1959	1623	3,640	Dec. 29, 1958	94	298	1.41	19.17	361	23.24
1960	1703	5,380	Feb. 6, 1960	151	491	2.33	31.67	-	-

1515. Broad River near Boiling Springs, N. C.

Location.--Lat 35°12'40" (revised), long 81°41'50", on right bank half a mile upstream from Sandy Run Creek, 3 miles downstream from Second Broad River, and 3½ miles southwest of Boiling Springs, Cleveland County.

Drainage area.--864 sq mi.

Records available.--June 1925 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 639.92 ft above mean sea level (Duke Power Co. bench mark). Prior to July 20, 1934, at site 500 ft upstream at datum 1.00 ft higher.

Average discharge.--35 years (1925-60), 1,408 cfs.

Extremes.--1925-60: Maximum discharge, 73,300 cfs Aug. 16, 1928 (gage height, 24.3 ft, former site, present datum); minimum, 40 cfs Oct. 17, 1954 (gage height, 1.02 ft); minimum daily, 105 cfs Oct. 10, 1954.

Remarks.--Considerable diurnal fluctuation and some regulation caused by powerplants and reservoirs above station. Records of chemical analyses and water temperatures for the period October 1956 to September 1960 are published in reports of the Geological Survey.

Corrections.--In WSP 1303, some figures in water years 1928 and 1946 are listed in error; the correct figures are given herewith:

Month	Mean	Per square mile	Runoff in inches
December 1927.....	1,540	-	2.05
Calendar year 1927.....	917	-	14.41
Water year 1927-28.....	1,800	2.08	28.31
August 1946.....	1,242	-	1.66

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,394	1,041	2,113	1,082	1,560	1,865	1,786	1,127	1,109	812	792	554	1,269
1952	491	731	2,087	1,396	2,057	4,552	1,919	1,333	968	711	868	656	1,492
1953	536	629	777	1,411	2,169	2,023	1,219	1,128	951	605	552	739	1,055
1954	473	505	1,146	2,482	1,409	1,705	1,429	1,147	729	519	407	288	1,020
1955	237	407	597	679	1,226	843	1,431	1,235	783	955	792	507	805
1956	525	536	449	422	1,693	1,090	1,769	974	576	555	295	533	779
1957	537	622	775	835	1,984	1,623	2,767	1,182	2,148	847	770	1,336	1,275
1958	1,483	2,520	1,777	2,090	1,980	2,024	3,795	2,643	1,423	1,421	1,121	728	1,914
1959	760	800	1,416	1,449	1,248	1,337	2,031	1,995	1,546	1,316	924	1,661	1,373
1960	3,236	1,671	1,684	1,965	4,304	3,234	3,357	1,881	1,488	1,206	1,294	1,357	2,214

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.86	1.34	2.82	1.44	1.88	2.49	2.31	1.50	1.43	1.08	1.06	0.72	19.93
1952	.65	.94	2.79	1.86	2.57	6.07	2.48	1.78	1.25	.95	1.16	.85	23.35
1953	.72	.81	1.04	1.88	2.61	2.70	1.57	1.51	1.24	.80	.74	.95	16.57
1954	.63	.65	1.53	3.31	1.70	2.27	1.85	1.53	.94	.69	.54	.37	16.01
1955	.32	.52	.80	.91	1.48	1.13	1.85	1.65	1.01	1.27	1.06	.65	12.65
1956	.70	.69	.60	.56	2.11	1.45	2.28	1.30	.74	.74	.39	.69	12.25
1957	.72	.80	1.03	1.11	2.39	2.17	3.57	1.58	2.77	1.13	1.03	1.73	20.03
1958	1.98	3.25	2.37	2.79	2.39	2.70	4.90	3.53	1.84	1.90	1.50	.94	30.09
1959	1.01	1.03	1.89	1.93	1.50	1.78	2.62	2.66	2.00	1.76	1.23	2.14	21.55
1960	4.32	2.16	2.25	2.62	5.37	4.31	4.33	2.51	1.92	1.61	1.73	1.75	34.88

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,586	24.89
1951	1203	15,800	Dec. 8, 1950	327	1,269	1.47	19.93	1,164	18.29
1952	1233	17,600	Mar. 4, 1952	362	1,482	1.72	23.35	1,366	21.54
1953	1273	10,600	Feb. 21, 1953	271	1,055	1.22	16.57	1,071	16.81
1954	1333	20,600	Jan. 22, 1954	126	1,020	1.18	16.01	945	14.84
1955	1383	7,160	Feb. 7, 1955	105	805	.932	12.65	825	13.00
1956	1433	9,820	Apr. 16, 1956	-	779	.902	12.25	815	12.81
1957	1503	16,900	Apr. 6, 1957	316	1,275	1.48	20.03	1,597	25.08
1958	1553	15,400	Nov. 19, 1957	483	1,914	2.22	30.09	1,681	26.42
1959	1623	14,100	Dec. 29, 1958	491	1,373	1.59	21.55	1,678	26.35
1960	1703	17,100	Feb. 6, Mar. 31	700	2,214	2.56	34.88	-	-

† Corrected.

1521. First Broad River near Casar, N. C.

Location.--Lat 35°29'35", long 81°40'56", on right bank 570 ft upstream from highway bridge, half a mile upstream from No Business Creek, and 4.0 miles southwest of Casar, Cleveland County.

Drainage area.--59.5 sq mi.

Records available.--March 1959 to September 1960. Occasional low-flow measurements 1949-56.

Gage.--Water-stage recorder. Altitude of gage is 890 ft (from topographic map).

Extremes.--1959-60: Maximum discharge, 3,700 cfs Oct. 10, 1959 (gage height, 11.45 ft); minimum, 30 cfs Aug. 17-20, 23, 24, 1959 (gage height, 1.15 ft). A base-flow discharge of 14.5 cfs was measured on Sept. 21, 1955.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	-	-	-	-	-	76.1	110	73.7	82.4	56.0	61.2	132	-
1960	225	82.4	101	115	286	240	241	116	92.5	67.1	60.6	61.8	139

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	-	-	-	-	-	1.47	2.06	1.43	1.55	1.08	1.19	2.48	-
1960	4.36	1.55	1.97	2.23	5.18	4.65	4.51	2.25	1.73	1.30	1.17	.97	31.87

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1959	1623	a3,150	Sept. 30, 1959	b30	-	-	-	-	-
1960	1703	3,700	Oct. 10, 1959	40	139	2.34	31.87	-	-

a Maximum during period Mar. 1 to Sept. 30.

b Minimum during period Mar. 1 to Sept. 30.

1525. First Broad River near Lawndale, N. C.

Location.--Lat 35°22'50", long 81°32'40", on left bank 0.2 mile upstream from Shoal Rock Creek, 0.4 mile downstream from highway bridge at Double Shoals, and 2½ miles southeast of Lawndale, Cleveland County.

Drainage area.--198 sq mi.

Records available.--February 1940 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 735.94 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--20 years (1940-60), 270 cfs.

Extremes.--1940-60: Maximum discharge, 32,500 cfs Aug. 14, 1940 (gage height, 37.8 ft), from rating curve extended above 12,000 cfs on basis of records for nearby streams; minimum, 13 cfs Sept. 18, 1955; minimum daily, 17 cfs Aug. 11, 1956.
Flood in July 1916 reached a stage of 37.8 ft, from floodmark established by local resident.

Remarks.--Considerable diurnal fluctuation and slight regulation at low flow caused by powerplants and mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	169	137	330	148	261	302	235	149	174	144	179	101	194
1952	80.5	114	393	325	380	1,107	309	209	169	114	264	150	302
1953	109	125	139	291	406	355	199	184	156	95.3	94.0	442	215
1954	105	103	236	650	378	412	260	211	132	95.5	72.4	53.5	226
1955	53.2	89.5	119	120	248	151	263	193	122	231	103	66.6	146
1956	84.0	76.9	75.2	72.5	352	204	388	166	95.1	87.6	45.0	92.8	144
1957	80.3	93.3	175	176	502	285	409	209	542	147	165	278	252
1958	225	625	340	421	408	847	535	271	258	228	147	393	393
1959	144	141	342	253	237	247	368	242	300	221	221	415	261
1960	637	266	316	379	917	760	697	366	313	250	205	191	440

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.98	0.77	1.92	0.86	1.37	1.76	1.33	0.87	0.98	0.84	1.04	0.57	13.29
1952	.47	.64	2.29	1.89	2.07	6.45	1.74	1.22	.95	.67	1.54	.84	20.77
1953	.64	.70	.81	1.70	2.14	2.07	1.12	1.07	.88	.55	.55	2.49	14.72
1954	.61	.58	1.37	3.78	1.99	2.40	1.47	1.23	.75	.56	.42	.30	15.46
1955	.31	.50	.70	.70	1.31	.88	1.48	1.12	.69	1.35	.60	.38	10.02
1956	.49	.43	.44	.42	1.92	1.19	.97	.54	.51	.26	.52	.98	9.88
1957	.47	.53	1.02	1.03	2.64	1.66	2.31	1.22	3.05	.86	.98	1.57	17.31
1958	1.31	3.52	1.98	2.45	2.22	2.37	4.77	3.11	1.53	1.50	1.33	.83	26.92
1959	.84	.79	1.99	1.47	1.25	1.44	2.08	1.41	1.69	1.28	1.29	2.34	17.87
1960	3.71	1.50	1.84	2.21	4.99	4.43	3.93	2.13	1.76	1.45	1.19	1.08	30.22

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	223	15.30
1951	1203	5,390	Dec. 7, 1950	82	194	0.980	13.29	190	13.02
1952	1233	9,880	Mar. 4, 1952	65	302	1.53	20.77	264	19.52
1953	1273	6,880	Sept. 4, 1953	52	215	1.09	14.72	221	15.13
1954	1333	8,900	Jan. 23, 1954	23	226	1.14	15.46	210	14.41
1955	1383	3,150	Feb. 7, 1955	31	146	.737	10.02	144	9.87
1956	1433	3,550	Apr. 16, 1956	17	144	.727	9.88	153	10.54
1957	1503	6,800	Jan. 31, 1957	43	252	1.27	17.31	322	22.10
1958	1553	6,320	Apr. 28, 1958	84	593	1.98	26.92	346	23.73
1959	1623	6,080	Dec. 28, 1958	94	261	1.32	17.87	311	21.30
1960	1703	5,660	Oct. 11, 1959	115	440	2.22	30.22	-	-

1535. Broad River near Gaffney, S. C.

Location.--Lat 35°05'20", long 81°34'20", on right bank at downstream side of bridge on U.S. Highway 29A, 0.3 mile upstream from Cherokee Creek, 4.4 miles downstream from Gaston Shoals Dam, and 4.5 miles east of Gaffney, Cherokee County.

Drainage area.--1,490 sq mi, approximately.

Records available.--July 1896 to December 1899 (gage heights and discharge measurements only), October 1938 to September 1960. Monthly discharge only for some periods, published in WSP 1303. Discharges for July 12, 1896, to Dec. 31, 1899, published in the 18th, 19th, and 21st Annual Reports, Part 4, have been found to be unreliable and should not be used.

Gage.--Water-stage recorder. Datum of gage is 539.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 12, 1896, to Dec. 31, 1899, chain or staff gages at sites 1.1 miles upstream at different datum.

Average discharge.--22 years (1938-60), 2,379 cfs.

Extremes.--1938-60: Maximum discharge, 119,000 cfs Aug. 14, 1940 (gage height, 19.78 ft), by computation of flow over Gaston Shoals Dam; minimum, 140 cfs Oct. 24, 1954; minimum daily, 224 cfs Oct. 24, 1954.

Remarks.--Some regulation at medium and low flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,176	1,621	3,279	1,671	2,370	3,114	2,946	1,821	1,801	1,402	1,322	1,010	2,044
1952	805	1,258	3,704	2,546	3,592	8,762	3,056	2,099	1,634	1,179	2,594	1,403	2,723
1953	1,085	1,188	1,350	2,816	3,989	3,553	2,039	1,991	1,812	1,036	920	1,888	1,958
1954	897	937	2,176	4,782	2,383	3,180	2,530	1,782	1,096	885	785	515	1,831
1955	459	782	1,126	1,250	2,396	1,523	2,545	2,229	1,348	1,860	1,293	752	1,457
1956	1,138	847	762	738	3,476	2,208	3,297	1,681	884	974	474	1,088	1,451
1957	898	1,063	1,477	1,332	3,588	2,850	4,021	1,740	3,451	1,173	1,284	2,182	2,068
1958	2,295	5,128	2,908	3,690	3,526	3,717	7,300	4,513	2,324	2,505	2,069	1,263	3,429
1959	1,230	1,322	2,612	2,505	2,291	2,538	4,017	3,238	2,666	2,152	1,683	3,105	2,444
1960	5,799	2,677	2,823	3,337	7,745	5,709	5,496	2,814	2,457	1,966	2,019	2,132	3,732

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.68	1.22	2.54	1.29	1.66	2.41	2.21	1.41	1.35	1.08	1.02	0.76	18.63
1952	.82	.93	2.87	1.97	2.60	6.78	2.29	1.63	1.23	.81	2.01	1.05	24.89
1953	.84	.89	1.04	2.18	2.79	2.74	1.53	1.54	1.36	.80	.71	1.42	17.84
1954	.69	.70	1.68	3.70	1.67	2.46	1.90	1.38	.82	.68	.61	.39	16.68
1955	.36	.59	.87	.97	1.68	1.18	1.91	1.73	1.01	1.44	1.00	.56	13.30
1956	.68	.63	.59	.57	2.51	1.71	2.47	1.28	.66	.75	.37	.81	13.23
1957	.70	.81	1.14	1.03	2.51	2.20	3.01	1.35	2.59	.91	.98	1.62	18.85
1958	1.78	3.84	2.25	2.78	2.53	2.87	5.47	3.49	1.74	1.94	1.60	.95	31.24
1959	.95	.99	2.02	1.94	1.60	1.96	3.01	2.50	2.00	1.66	1.30	2.32	22.25
1960	4.48	2.01	2.18	2.58	5.61	4.42	4.12	2.18	1.84	1.52	1.57	1.60	34.11

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	2,453	22.34
1951	1203	23,900	Dec. 8, 1950	672	2,044	1.37	18.63	1,932	17.61
1952	1233	44,200	Mar. 4, 1952	598	2,723	1.83	24.89	2,543	23.24
1953	1273	21,900	Feb. 21, 1953	466	1,958	1.31	17.84	1,992	18.14
1954	1333	41,000	Jan. 23, 1954	399	1,831	1.23	16.68	1,691	15.43
1955	1383	14,700	Feb. 7, 1955	224	1,457	.978	13.30	1,459	13.58
1956	1433	22,400	Apr. 16, 1956	300	1,451	.974	13.23	1,610	13.78
1957	1503	23,400	Apr. 6, 1957	381	2,068	1.39	18.85	2,640	24.07
1958	1553	37,900	Apr. 28, 1958	900	3,429	2.30	31.24	3,001	27.33
1959	1623	38,600	Sept. 30, 1959	867	2,444	1.64	22.25	2,961	26.96
1960	1703	a33,600	Feb. 6, 1960	1,050	3,732	2.50	34.11	-	-

a Maximum peak discharge; maximum discharge during year, 37,200 cfs at 12:01 a.m. Oct. 1, stage falling.

1545. North Pacolet River at Pingerville, S. C.

Location.--Lat 35°07", long 81°59', on right bank at McMillin Mill, about 400 ft downstream from Obed Creek and 1 mile south of Pingerville, Spartanburg County.

Drainage area.--116 sq mi.

Records available.--October 1929 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 715.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 24, 1933, at site about 400 ft downstream at datum 5.60 ft higher.

Average discharge.--31 years (1929-60), 203 cfs.

Extremes.--1929-60: Maximum discharge, 12,500 cfs Aug. 14, 1940 (gage height, 27.13 ft), from rating curve extended above 3,300 cfs on basis of computation of peak flow over dam 2 miles above station; minimum, 9 cfs Oct. 6, 1954; minimum daily, 28 cfs Oct. 6, 7, 1954.

Remarks.--Some diurnal fluctuation at low and medium flow caused by mill above station. Records of chemical analyses and water temperatures for the period October 1951 to September 1952 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	206	134	267	137	172	256	228	152	160	104	81.6	100	166
1952	73.9	120	334	224	280	752	299	192	147	110	144	97.9	232
1953	84.7	98.2	124	217	338	292	166	184	193	88.2	63.1	83.1	160
1954	67.1	75.3	199	429	185	229	224	160	107	94.4	51.2	34.1	155
1955	35.1	81.5	115	97.5	211	100	181	217	104	149	82.5	56.0	119
1956	64.4	65.5	65.7	66.6	253	172	273	120	64.9	89.6	45.3	91.3	113
1957	70.4	87.1	110	124	274	232	307	128	183	90.8	95.6	188	156
1958	195	335	223	256	264	272	577	331	180	181	184	114	259
1959	104	110	207	198	179	187	282	466	263	201	123	178	208
1960	346	219	240	269	621	461	393	266	224	178	164	186	296

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.05	1.29	2.65	1.36	1.54	2.55	2.20	1.51	1.54	1.03	0.81	0.96	19.49
1952	.73	1.15	3.32	2.22	2.60	7.47	2.88	1.91	1.42	1.09	1.43	.94	27.16
1953	.84	.94	1.23	2.16	3.03	2.90	1.60	1.83	1.85	.88	.63	.80	18.69
1954	.67	.72	1.98	4.27	1.66	2.27	2.15	1.59	1.03	.94	.51	.33	18.12
1955	.35	.78	1.14	.97	1.90	.99	1.74	2.16	1.00	1.48	.82	.54	13.87
1956	.64	.63	.65	.66	2.35	1.71	2.62	1.19	.62	.89	.45	.88	13.29
1957	.70	.84	1.09	1.23	2.46	2.31	2.96	1.27	1.76	.90	.95	1.81	18.28
1958	1.94	3.22	2.21	2.55	2.37	2.70	5.54	3.29	1.73	1.80	1.83	1.10	30.28
1959	1.03	1.06	2.05	1.97	1.60	1.86	2.71	4.64	2.53	1.99	1.22	1.71	24.37
1960	3.44	2.11	2.39	2.68	5.77	4.58	3.78	2.64	2.15	1.76	1.63	1.78	34.71

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	204	23.85
1951	1203	2,320	Dec. 8, 1950	57	166	1.45	19.49	160	18.70
1952	1233	3,880	Mar. 4, 1952	62	232	2.00	27.16	213	24.97
1953	1273	2,360	Feb. 21, 1953	42	160	1.38	18.69	163	19.05
1954	1333	5,040	Jan. 23, 1954	29	155	1.34	18.12	145	17.02
1955	1383	1,840	Feb. 7, 1955	28	119	1.03	13.87	116	13.52
1956	1433	1,690	Apr. 16, 1956	29	113	.974	13.29	119	14.00
1957	1503	2,620	Apr. 6, 1957	48	156	1.34	18.28	197	23.02
1958	1553	3,480	Apr. 29, 1958	94	259	2.23	30.28	231	27.05
1959	1623	6,680	May 26, 1959	90	208	1.79	24.37	241	28.17
1960	1703	3,200	Mar. 31, 1960	116	296	2.55	34.71	-	-

1550. South Pacolet River Reservoir near Fingerville, S. C.

Location.--Lat 35°07', long 81°59', on downstream side of right pier of highway bridge, 1 mile upstream from dam and 1¼ miles south of Fingerville, Spartanburg County.

Drainage area.--92 sq mi, approximately.

Records available.--March 1930 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 761.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--1930-60: Maximum contents, 1,270,000,000 gal Mar. 30, 1960 (gage height, 18.25 ft); minimum, 85,500,000 gal Oct. 8, 1930 (gage height, 2.76 ft).

Remarks.--Reservoir is formed by concrete dam completed in 1926. Capacity, 1,104,000,000 gal between gage heights 0.0 ft (limit of drawdown) and 17.0 ft (top of gates completed in August 1956). Dead storage is about 350,000,000 gal. Figures given herein represent usable contents. Spillway crest is at gage height 12.0 ft. City of Spartanburg diverts water from reservoir for municipal supply. Surplus water is used for generation of power.

Contents, in millions of gallons, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	676	669	626	648	626	868	721	629	608	512	446	486
1952	464	505	684	813	717	843	761	746	615	432	658	512
1953	403	502	590	578	617	725	705	521	647	496	367	663
1954	458	629	512	655	763	835	769	594	554	529	403	255
1955	398	676	682	715	618	633	620	859	832	812	523	431
1956	715	677	597	599	687	810	824	855	678	626	346	889
1957	632	523	921	937	1,002	965	1,067	1,081	1,043	943	995	1,144
1958	956	1,024	991	1,064	1,046	1,137	1,052	1,026	817	827	664	764
1959	794	814	783	708	608	780	792	855	867	799	797	788
1960	779	708	817	846	1,088	1,025	1,076	982	1,056	971	1,016	982

1555. Pacolet River near Fingerville, S. C.

Location.--Lat 35°07', long 81°58', on right bank 100 ft upstream from highway bridge, a quarter of a mile downstream from confluence of North Pacolet and South Pacolet Rivers, and 2½ miles southeast of Fingerville, Spartanburg County.

Drainage area.--212 sq mi.

Records available.--October 1929 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 706.33 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--31 years (1929-60), 333 cfs.

Extremes.--1929-60: Maximum discharge, 22,800 cfs Aug. 14, 1940 (gage height, 22.43 ft), from rating curve extended above 9,600 cfs by velocity-area studies; minimum daily, 32 cfs Oct. 6, 7, 1954.

Maximum stage known, 46 ft in June 1903, from floodmark (discharge not determined).

Remarks.--Some regulation by South Pacolet River Reservoir and since January 1960 by Lake William C. Bowen. Some diurnal fluctuation caused by mill on North Pacolet River. City of Spartanburg diverts water above station from South Pacolet River Reservoir for municipal supply. Records of chemical analyses and water temperatures for the periods October 1952 to September 1953 and October 1959 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	314	203	460	215	291	405	373	233	255	163	124	160	266
1952	111	191	582	366	480	1,324	487	322	227	161	207	148	385
1953	137	147	135	380	600	477	270	322	306	150	105	113	265
1954	113	112	353	745	308	398	383	276	168	151	72.7	51.0	261
1955	42.2	112	187	160	368	172	338	381	156	280	131	76.3	199
1956	98.0	106	106	107	458	298	507	187	98.8	134	64.7	137	190
1957	121	145	167	204	466	390	502	207	285	139	150	321	256
1958	343	690	360	433	444	457	1,017	564	286	301	298	172	446
1959	164	174	349	335	296	298	496	816	445	355	205	352	357
1960	619	327	368	345	730	790	642	445	399	342	225	315	461

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	-	328	-
1951	1203	4,120	Dec. 8, 1950	69	266	-	-	-	258	-
1952	1233	6,760	Mar. 24, 1952	74	385	-	-	-	350	-
1953	1273	3,710	Feb. 21, 1953	66	265	-	-	-	273	-
1954	1335	7,750	Jan. 23, 1954	44	261	-	-	-	241	-
1955	1383	2,810	Feb. 7, May 23	32	199	-	-	-	197	-
1956	1433	3,160	Apr. 17, 1956	38	190	-	-	-	200	-
1957	1503	4,570	Apr. 6, 1957	72	256	-	-	-	336	-
1958	1553	5,450	Apr. 29, 1958	109	446	-	-	-	387	-
1959	1623	11,600	May 26, 1959	134	357	-	-	-	410	-
1960	1703	6,050	Mar. 30, 1960	136	461	-	-	-	-	-

1560. Pacolet River near Clifton, S. C.

Location.--Lat 34°58'10", long 81°48'05", on left bank 1.2 miles downstream from dam at Clifton Mill 2, 1.3 miles southeast of Clifton, Spartanburg County, 2.7 miles upstream from Lawson Fork, and 2.7 miles northeast of Glendale.

Drainage area.--320 sq mi.

Records available.--October 1939 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Altitude of gage is 540 ft (from topographic map).

Average discharge.--21 years (1939-60), 470 cfs.

Extremes.--1939-60: Maximum discharge, 26,800 cfs Aug. 14, 1940 (gage height, 21.19 ft), from rating curve extended above 13,000 cfs on basis of computation of peak flow over dam at Clifton Mill 2; minimum daily, 17 cfs Oct. 19, 1941.

Remarks.--Some regulation at low and medium flow by powerplants above station, South Pacolet River Reservoir, and since January 1960 by Lake William C. Bowen. City of Spartanburg diverts water above station from South Pacolet River Reservoir for municipal supply.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	419	315	673	315	410	587	548	309	370	250	177	255	386
1952	157	255	883	518	678	1,967	663	433	315	221	297	210	551
1953	199	209	263	540	850	672	398	472	433	228	164	190	382
1954	167	174	506	1,104	466	628	587	395	244	209	114	65.8	389
1955	60.0	147	260	243	528	292	532	526	261	390	231	124	298
1956	170	169	167	169	767	466	824	318	166	219	97.5	298	318
1957	188	223	267	297	661	579	714	328	398	212	306	440	382
1958	500	1,012	579	684	645	664	1,465	798	411	496	425	278	662
1959	247	250	484	474	426	451	757	1,081	583	471	299	557	507
1960	946	474	523	574	1,248	1,149	932	607	555	468	327	442	685

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	481	-
1951	1203	6,100	Dec. 7, 1950	87	386	-	-	376	-
1952	1233	11,400	Mar. 24, 1952	68	551	-	-	498	-
1953	1273	4,800	Feb. 21, 1953	66	382	-	-	397	-
1954	1333	8,520	Jan. 22, 1954	34	389	-	-	357	-
1955	1385	4,020	Feb. 6, 1955	39	298	-	-	301	-
1956	1433	9,170	Apr. 16, 1956	42	318	-	-	332	-
1957	1503	6,480	Aug. 14, 1957	94	382	-	-	499	-
1958	1553	12,600	Nov. 19, 1957	141	662	-	-	569	-
1959	1623	12,600	May 26, 1959	179	507	-	-	588	-
1960	1703	9,840	Feb. 5, 1960	169	685	-	-	-	-

1565. Broad River near Carlisle, S. C.

Location--Lat 34°36', long 81°25', on right bank at downstream side of bridge on State Highway 72, 2 miles upstream from Sandy River, 2 miles downstream from Seaboard Air Line Railroad bridge, 2½ miles east of Carlisle, Union County, and 5 miles downstream from Neals Shoals Dam.

Drainage area--2,790 sq mi, approximately.

Records available--October 1938 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage--Water-stage recorder. Datum of gage is 290.70 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge--22 years (1938-60), 3,726 cfs.

Extremes--1938-60: Maximum discharge, 103,000 cfs Aug. 15, 1940 (gage height, 29.41 ft), from rating curve extended above 52,000 cfs on basis of computation of peak flow over Neals Shoals Dam; minimum, 37 cfs Aug. 29, 1955; minimum daily, 44 cfs Sept. 2, 1956.

Remarks--Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,032	2,173	4,273	2,480	3,455	4,596	4,532	2,474	2,480	2,006	1,739	1,794	2,917
1952	1,175	1,801	6,105	3,696	5,619	14,920	4,784	3,201	2,355	1,635	3,602	2,160	4,264
1953	1,478	1,617	2,019	4,837	7,793	6,413	3,094	3,677	2,587	1,572	1,288	2,318	3,196
1954	1,248	1,263	3,921	8,494	3,632	5,426	4,253	2,493	1,506	1,179	982	628	2,924
1955	562	1,087	1,659	1,997	4,330	2,433	4,699	3,457	1,836	2,424	1,621	892	2,234
1956	1,546	1,374	1,271	1,220	6,315	4,414	5,990	3,270	1,396	1,507	750	2,149	2,579
1957	1,484	1,616	2,305	2,216	5,048	4,822	5,582	3,056	4,205	1,653	1,782	2,679	3,016
1958	3,339	8,651	4,413	5,484	5,239	5,122	11,400	7,315	3,475	4,131	2,768	1,628	5,235
1959	1,657	1,709	3,443	5,696	3,612	4,305	5,950	4,659	4,177	3,695	2,627	4,493	3,661
1960	9,120	3,945	4,468	5,824	13,040	8,407	8,531	4,883	3,968	2,732	2,911	3,155	5,886

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.26	0.87	1.76	1.02	1.29	1.90	1.81	1.02	0.99	0.83	0.72	0.72	14.19
1952	.49	.72	2.52	1.52	2.17	6.17	1.91	1.33	.95	.68	1.49	.86	20.81
1953	.61	.65	.83	1.99	2.90	2.65	1.24	1.52	1.03	.65	.53	.93	15.53
1954	.52	.51	1.63	3.50	1.35	2.24	1.70	1.03	.60	.49	.41	.25	14.23
1955	.25	.44	.69	.83	1.61	1.01	1.87	1.43	.73	1.00	.67	.36	10.87
1956	.64	.55	.53	.50	2.44	1.82	2.40	1.35	.56	.68	.31	.86	12.58
1957	.61	.65	.95	.92	1.88	1.99	2.23	1.27	1.68	.62	.74	1.07	14.67
1958	1.38	3.46	1.82	2.27	1.96	2.12	4.56	3.02	1.29	1.71	1.14	.65	25.38
1959	.68	.68	1.42	1.52	1.34	1.78	2.38	1.91	1.67	1.52	1.09	1.80	17.79
1960	3.77	1.57	1.84	2.41	5.04	3.47	3.41	2.02	1.58	1.13	1.20	1.25	28.69

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	3,440	16.76
1951	1203	27,000	Dec. 9, 1950	186	2,917	1.05	14.19	2,864	14.03
1952	1233	57,700	Mar. 5, 1952	57	4,264	1.53	20.81	3,929	19.17
1953	1273	33,200	Feb. 22, 1953	460	3,196	1.15	15.53	3,309	16.10
1954	1333	49,200	Jan. 24, 1954	57	2,924	1.05	14.23	2,659	12.93
1955	1383	27,500	Apr. 15, 1955	50	2,234	.801	10.87	2,308	11.23
1956	1433	30,900	Apr. 17, 1956	44	2,579	.924	12.58	2,661	13.07
1957	1503	25,900	Apr. 7, 1957	57	3,016	1.08	14.67	3,930	19.12
1958	1553	48,000	Apr. 29, 1958	938	5,236	1.88	25.38	4,438	21.50
1959	1623	a28,700	Dec. 30, 1958	813	3,661	1.31	17.79	4,567	22.19
1960	1703	42,100	Feb. 7, 1960	1,710	5,886	2.11	28.69	-	-

a Maximum peak discharge; maximum discharge during year, 33,500 cfs at 12 p.m. Sept. 30, stage rising.

1570. North Tyger River near Fairmont, S. C.

Location.--Lat 34°55'45", long 82°02'40", on left bank 80 ft downstream from Frey Creek and 2.2 miles north of Fairmont, Spartanburg County.

Drainage area.--44 sq mi, approximately.

Records available.--October 1950 to September 1960.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 680 ft (from topographic map).

Average discharge.--10 years (1950-60), 59.3 cfs.

Extremes.--1950-60: Maximum discharge, 3,610 cfs May 26, 1959 (gage height, 13.58 ft), From rating curve extended above 2,100 cfs by logarithmic plotting; minimum, 6.0 cfs Sept. 19, 20, 1954; minimum daily, 7.0 cfs Sept. 19, 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	41.3	33.7	81.9	38.1	46.8	73.0	55.5	34.5	54.3	24.0	17.7	31.5	44.3
1952	22.8	33.2	123	63.6	77.9	243	97.8	54.9	44.3	25.4	35.3	26.4	70.8
1953	26.2	30.2	41.3	71.8	107	73.3	47.1	69.7	78.0	22.4	17.6	25.8	50.4
1954	22.7	22.9	58.7	121	53.5	78.5	79.2	51.1	37.7	23.9	14.1	8.52	47.7
1955	11.0	22.3	33.5	34.5	61.2	35.1	92.8	89.6	29.9	36.8	25.7	16.5	40.6
1956	34.0	25.2	24.0	24.1	124	78.4	130	71.5	29.0	33.4	15.4	54.6	53.2
1957	30.8	35.6	38.7	39.5	76.9	72.0	64.7	34.8	31.6	16.5	18.0	38.1	41.1
1958	46.3	120	64.3	78.5	70.9	75.5	159	90.2	44.5	71.1	45.9	29.1	74.5
1959	30.4	31.1	54.3	53.6	55.1	61.8	99.1	155	108	106	54.8	104	76.1
1960	152	75.7	74.5	94.8	175	124	96.1	71.5	61.6	47.0	72.5	92.3	94.4

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.08	0.85	2.14	1.00	1.10	1.91	1.41	0.90	1.37	0.63	0.46	0.80	13.65
1952	.60	.84	3.23	1.67	1.91	6.36	2.48	1.44	1.15	.87	.92	.67	21.92
1953	.69	.77	1.08	1.88	2.53	1.92	1.19	1.82	1.98	.59	.46	.65	15.56
1954	.59	.58	1.53	3.17	1.27	2.05	2.01	1.34	.96	.63	.37	.22	14.72
1955	.29	.57	.88	.90	1.45	.92	2.35	2.35	.76	.96	.67	.42	12.52
1956	.89	.64	.63	.63	3.04	2.05	3.29	1.87	.74	.88	.40	1.38	16.44
1957	.81	.90	1.01	1.04	1.82	1.89	1.64	.91	.80	.43	.47	.97	12.69
1958	1.21	3.05	1.68	2.05	1.68	1.98	4.03	2.36	1.13	1.87	1.20	.74	22.98
1959	.80	.79	1.42	1.41	1.30	1.81	2.51	4.06	2.73	2.78	1.44	2.63	23.48
1960	3.98	1.92	1.95	2.48	4.29	3.25	2.43	1.87	1.56	1.23	1.90	2.34	29.20

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1203	1,510	Dec. 7, 1950	11	44.3	1.01	13.65	46.2	14.25
1952	1233	2,280	Mar. 4, 1952	17	70.8	1.61	21.92	65.9	19.79
1953	1273	722	Feb. 21, 1953	12	50.4	1.15	15.56	51.0	15.72
1954	1333	1,170	Jan. 22 or 23	7.0	47.7	1.08	14.72	44.5	13.76
1955	1383	1,650	May 22, 1955	7.7	40.6	.923	12.52	42.0	12.94
1956	1433	1,790	Apr. 16, 1956	9.8	53.2	1.21	16.44	55.1	17.00
1957	1503	466	Apr. 5, 1957	11	41.1	.934	12.69	51.5	15.91
1958	1553	1,480	Nov. 19, 1957	24	74.5	1.69	22.98	65.0	20.05
1959	1623	3,610	May 26, 1959	27	76.1	1.73	23.48	91.8	28.32
1960	1703	1,790	Sept. 7, 1960	35	94.4	2.15	29.20	-	-

1575. Middle Tyger River at Lyman, S. C.

Location--Lat 34°56'135", long 82°08'00", on left bank 200 ft upstream from bridge on State Highway 292 at Lyman, Spartanburg County, 600 ft downstream from Southern Railway bridge, and 0.8 mile northeast of Duncan.

Drainage area--68.3 sq mi.

Records available--October 1937 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage--Water-stage recorder and masonry control. Datum of gage is 776.05 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge--23 years (1937-60), 98.2 cfs.

Extremes--1937-60: Maximum discharge, 4,800 cfs Aug. 14, 1940 (gage height, 16.16 ft), from rating curve extended above 2,900 cfs on basis of computation of peak flow over dam; minimum, 1 cfs Sept. 25, 1940, Oct. 3, 1954, Aug. 30, 1956; minimum daily, 5 cfs Sept. 24, 1955.

Remarks--Flow regulated by reservoir 5.7 miles (revised) above station since Sept. 22, 1955.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	73.7	58.9	125	68.8	81.7	118	96.9	57.7	74.5	38.9	43.8	52.8	74.2
1952	34.0	56.9	224	105	135	471	175	90.6	61.9	49.4	72.3	41.2	127
1953	42.2	48.8	63.6	133	203	132	80.9	109	109	48.4	40.7	41.4	87.0
1954	40.4	42.0	113	262	79.6	119	139	91.1	58.2	40.2	28.8	16.5	86.1
1955	15.2	34.5	56.6	55.3	122	54.5	104	119	49.3	81.5	33.6	19.7	61.8
1956	25.5	28.8	20.5	23.3	177	107	195	75.8	32.1	34.9	27.8	41.7	65.1
1957	20.4	31.0	62.8	66.2	150	107	151	59.1	56.2	34.9	49.2	83.7	71.9
1958	134	164	117	139	133	135	302	161	78.3	151	109	53.4	140
1959	51.5	54.3	93.9	92.3	90.2	104	153	271	191	100	67.1	142	118
1960	234	102	120	168	353	263	188	121	103	129	96.8	83.3	163

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.24	0.96	2.11	1.16	1.25	1.99	1.58	0.97	1.22	0.66	0.74	0.86	14.74
1952	.57	.93	3.78	1.78	2.14	7.96	2.86	1.53	1.01	.83	1.22	.67	25.28
1953	.71	.80	1.07	2.25	3.09	2.22	1.32	1.84	1.78	.82	.69	.69	17.27
1954	.68	.69	1.90	4.43	1.22	2.01	2.28	1.53	.95	.68	.49	.27	17.13
1955	.26	.56	.96	.93	1.86	.92	1.70	2.01	.81	1.37	.57	.32	12.27
1956	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	91.1	18.10	
1951	1203	1,680	Dec. 8, 1950	25	74.2	1.09	14.74	79.0	15.71	
1952	1233	3,070	Mar. 23, 1952	28	127	1.88	25.28	113	22.58	
1953	1273	1,840	Feb. 21, 1953	20	87.0	1.27	17.27	90.5	17.96	
1954	1333	2,520	Jan. 23, 1954	11	86.1	1.26	17.13	78.5	15.64	
1955	1383	1,440	Feb. 7, 1955	5	61.8	.905	12.27	59.1	-	
1956	1433	2,160	Apr. 16, 1956	12	65.1	-	-	68.4	-	
1957	1503	1,710	Apr. 6, 1957	14	71.9	-	-	97.1	-	
1958	1553	1,960	Apr. 29, 1958	38	140	-	-	122	-	
1959	1623	3,070	May 26, 1959	41	119	-	-	139	-	
1960	1703	2,240	Mar. 31, 1960	51	163	-	-	-	-	

1580. North Tyger River near Moore, S. C.

Location.--Lat 34°48'10", long 81°57'57", on right bank at Ott Shoals, 2.0 miles upstream from Wards Creek, 2.6 miles southeast of Moore, Spartanburg County, and 5.3 miles upstream from confluence with South Tyger River.

Drainage area.--162 sq mi.

Records available.--October 1933 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder and concrete control. Datum of gage is 564.79 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--27 years (1933-60), 226 cfs.

Extremes.--1933-60: Maximum discharge, 12,300 cfs Aug. 14, 1940 (gage height, 7.15 ft), from rating curve extended above 7,800 cfs by velocity-area studies; minimum, 13 cfs Dec. 29, 1935; minimum daily, 16 cfs Oct. 3, 1954.

Remarks.--Some regulation at low flow by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	153	125	258	139	192	245	227	128	179	73.1	91.8	156	164
1952	80.4	123	427	236	313	950	363	203	161	108	167	108	271
1953	102	108	141	312	429	299	184	258	245	103	71.1	88.5	194
1954	76.5	77.6	249	540	189	297	271	181	122	85.7	50.7	35.6	182
1955	33.3	69.8	122	156	251	136	285	250	92.2	149	86.9	48.3	137
1956	79.4	78.0	65.2	68.8	439	284	454	238	97.4	92.6	69.2	148	175
1957	84.2	102	138	146	308	252	269	131	120	74.5	85.0	156	154
1958	228	426	245	295	280	293	632	410	176	314	202	119	301
1959	113	119	194	202	210	234	376	509	379	282	165	300	257
1960	569	239	271	332	732	460	419	255	231	229	226	261	351

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.09	0.86	1.83	0.99	1.24	1.74	1.56	0.91	1.23	0.52	0.65	1.07	13.69
1952	.57	.85	3.04	1.68	2.08	6.76	2.50	1.44	1.11	.77	1.19	.74	22.73
1953	.73	.74	1.00	2.22	2.76	2.13	1.27	1.85	1.68	.73	.51	.61	16.21
1954	.54	.53	1.78	3.84	1.22	2.11	1.86	1.29	.84	.61	.36	.25	15.23
1955	.24	.48	.87	.97	1.61	.97	1.96	1.78	.63	1.06	.62	.33	11.52
1956	.56	.54	.46	.49	2.92	2.02	3.12	1.70	.67	.66	.49	1.02	14.65
1957	.60	.70	.98	1.04	1.98	1.80	1.85	.93	.83	.53	.61	1.07	12.92
1958	1.63	2.93	1.74	2.10	1.80	2.09	4.35	2.92	1.22	2.24	1.44	.82	25.28
1959	.80	.82	1.38	1.44	1.35	1.66	2.59	3.62	2.61	2.01	1.18	2.06	21.52
1960	4.05	1.65	1.92	2.36	4.88	3.27	2.89	1.81	1.60	1.63	1.61	1.80	29.47

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	191	16.02
1951	1203	1,950	Dec. 8, 1950	21	164	1.01	13.69	172	14.37
1952	1233	5,030	Mar. 24, 1952	48	271	1.67	22.73	247	20.74
1953	1273	2,160	Feb. 22, 1953	29	194	1.20	16.21	198	16.59
1954	1333	3,510	Jan. 23, 1954	19	182	1.12	15.23	167	13.97
1955	1383	2,020	May 23, 1955	16	137	.846	11.52	137	11.49
1956	1433	2,750	Apr. 16, 1956	32	175	1.08	14.65	183	15.37
1957	1503	1,460	Apr. 7, 1957	42	154	.951	12.92	202	16.94
1958	1553	2,750	(a)	74	301	1.86	25.28	262	21.98
1959	1623	6,020	May 26, 1959	67	257	1.59	21.52	312	26.14
1960	1703	3,020	Feb. 6, 1960	129	351	2.17	29.47	-	-

a Nov. 19, 1957, Apr. 30, 1958.

1585. South Tyger River near Reidville, S. C.

Location.--Lat 34°52'35", long 82°05'10", on left bank 0.4 mile upstream from bridge on State Highway 296, 1.2 miles downstream from Berry Shoals, 1.8 miles northeast of Reidville, Spartanburg County, and 4 miles upstream from Bens Creek.

Drainage area.--106 sq mi.

Records available.--April 1934 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 626.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--26 years (1934-60), 155 cfs.

Extremes.--1934-60: Maximum discharge, 6,420 cfs Oct. 7, 1949 (gage height, 14.23 ft); minimum, 3.7 cfs July 20, 1957; minimum daily, 5.5 cfs June 6, 1941.

Remarks.--Some regulation at low and medium flow by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	112	86.9	169	105	123	178	165	91.8	116	67.1	69.7	108	116
1952	52.9	92.0	295	158	202	625	242	149	109	83.1	118	76.4	184
1953	74.3	72.2	94.3	203	305	195	133	177	195	84.9	55.0	77.4	138
1954	57.7	65.0	173	346	142	204	171	103	82.5	52.7	34.6	17.4	121
1955	18.1	51.5	90.5	86.6	160	98.7	164	194	81.6	78.8	61.4	28.7	92.4
1956	65.3	54.8	58.2	57.5	281	173	272	151	70.5	75.2	35.1	85.2	114
1957	62.6	74.6	83.7	110	205	156	204	94.5	116	54.5	83.5	133	114
1958	160	238	193	202	204	199	400	299	141	207	105	95.1	203
1959	83.5	60.7	120	142	145	166	248	224	229	138	91.4	226	156
1960	316	152	189	225	438	335	308	197	175	179	173	152	236

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.22	0.91	1.63	1.14	1.21	1.94	1.74	1.00	1.22	0.73	0.76	1.14	14.84
1952	.58	.97	3.20	1.72	2.06	6.80	2.54	1.63	1.15	.90	1.28	.80	23.63
1953	.81	.76	1.03	2.21	3.00	2.13	1.40	1.92	2.05	.92	.60	.81	17.64
1954	.63	.68	1.88	3.76	1.40	2.21	1.80	1.12	.87	.57	.38	.18	15.48
1955	.20	.54	.98	.94	1.57	1.07	1.73	2.11	.86	.86	.67	.30	11.83
1956	.71	.58	.63	.62	2.86	1.88	2.87	1.64	.74	.82	.38	.90	14.63
1957	.68	.79	.91	1.20	2.01	1.70	2.14	1.03	1.22	.59	.91	1.40	14.58
1958	1.74	2.51	2.10	2.20	2.00	2.17	4.21	3.25	1.48	2.25	1.14	1.00	26.05
1959	.91	.64	1.30	1.54	1.43	1.81	2.61	2.43	2.41	1.50	.99	2.38	19.95
1960	3.44	1.60	2.05	2.44	4.45	3.64	3.25	2.14	1.84	1.95	1.88	1.60	30.28

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	142	18.13
1951	1203	1,320	Dec. 7, 1950	7.7	116	1.09	14.84	122	15.63
1952	1233	3,930	Mar. 24, 1952	11	184	1.74	23.63	167	21.48
1953	1273	1,570	Feb. 22, 1953	8.0	138	1.30	17.64	142	18.23
1954	1333	2,780	Jan. 22, 1954	11	121	1.14	15.48	110	14.01
1955	1383	2,190	May 23, 1955	6.5	92.4	.872	11.83	93.9	12.03
1956	1433	2,300	Apr. 16, 1956	8.5	114	1.08	14.63	117	15.09
1957	1503	1,020	Apr. 6, 1957	6.9	114	1.08	14.58	145	18.55
1958	1553	2,080	Nov. 19, 1957	18	203	1.92	26.05	176	22.55
1959	1623	1,320	May 26, 1959	9.0	156	1.47	19.95	189	24.19
1960	1703	1,870	Mar. 31, 1960	17	236	2.23	30.28	-	-

1590. South Tyger River near Woodruff, S. C.

Location.--Lat 34°45'21", long 81°56'19", on left bank at Chesnee Shoals, 0.5 mile upstream from confluence with North Tyger River and 5½ miles east of Woodruff, Spartanburg County.

Drainage area.--174 sq mi.

Records available.--October 1933 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder and concrete control. Datum of gage is 508.35 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--27 years (1933-60), 226 cfs.

Extremes.--1933-60: Maximum discharge, 9,510 cfs Apr. 6, 1936 (gage height, 9.78 ft), from rating curve extended above 7,700 cfs by velocity-area studies; minimum, 11 cfs Sept. 23, 1955 (gage height, 1.37 ft); minimum daily, 12 cfs Sept. 23, 1955.

Remarks.--Some regulation at low and medium flow by powerplants above station. Records of chemical analyses and water temperatures for the period October 1952 to September 1953 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	146	124	234	142	170	239	254	138	167	83.7	89.2	172	163
1952	80.9	128	426	223	312	957	349	206	165	107	200	108	272
1953	101	105	136	333	470	345	205	259	229	105	67.5	99.2	203
1954	82.6	91.9	248	518	194	300	250	151	110	70.8	38.1	21.8	175
1955	25.2	63.9	111	120	263	136	275	243	117	110	77.6	41.9	151
1956	90.7	79.0	77.0	72.8	427	295	409	218	91.2	88.1	48.2	127	167
1957	88.0	108	124	153	288	256	269	146	154	69.2	91.0	162	158
1958	204	405	270	310	304	298	603	419	184	316	152	120	298
1959	117	103	165	192	216	243	350	360	294	235	132	280	223
1960	456	220	274	358	685	464	465	282	247	243	229	215	344

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.97	0.80	1.54	0.94	1.02	1.58	1.63	0.91	1.07	0.55	0.59	1.10	12.70
1952	1.54	.82	2.82	1.48	1.93	6.34	2.24	1.36	1.06	.71	1.33	.69	21.32
1953	.67	.67	.90	2.20	2.81	2.28	1.32	1.72	1.47	.70	.45	.64	15.83
1954	.55	.59	1.65	3.44	1.16	1.98	1.61	1.00	.71	.47	.25	.14	13.55
1955	.15	.41	.74	.80	1.57	.90	1.76	1.61	.75	.73	.51	.27	10.20
1956	.60	.51	.51	.48	2.64	1.96	2.62	1.44	.58	.58	.32	.81	13.05
1957	.58	.69	.82	1.01	1.73	1.70	1.73	.97	.99	.46	.60	1.04	12.32
1958	1.35	2.60	1.79	2.05	1.62	1.97	3.87	2.78	1.18	2.10	1.01	.77	23.29
1959	.77	.66	1.09	1.27	1.29	1.61	2.24	2.39	1.89	1.56	.88	1.90	17.45
1960	5.02	1.41	1.81	2.36	4.25	3.08	2.98	1.87	1.58	1.61	1.52	1.38	26.89

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	193	15.06
1951	1203	1,040	Dec. 8, 1950	24	163	0.937	12.70	174	13.57
1952	1233	4,740	Mar. 24, 1952	41	272	1.56	21.32	248	19.38
1953	1273	1,800	Feb. 23, 1953	28	203	1.17	15.83	210	16.38
1954	1333	2,930	Jan. 23, 1954	13	173	.994	13.55	154	12.06
1955	1383	1,670	May 24, 1955	12	131	.753	10.20	135	10.52
1956	1433	2,280	Mar. 16, 1956	18	167	.960	13.05	173	13.52
1957	1503	950	Apr. 7, 1957	21	158	.908	12.32	204	15.97
1958	1553	2,640	Nov. 19, 1957	52	298	1.71	23.29	257	20.07
1959	1623	2,500	May 25, 1959	49	223	1.28	17.45	271	21.17
1960	1703	2,640	Feb. 6, 1960	71	344	1.98	26.89	-	-

1600. Fairforest Creek near Union, S. C.

Location.--Lat 34°41', long 81°41', on right bank at downstream side of bridge on State Highway 49, 0.3 mile downstream from Buffalo Creek and 4.3 miles southwest of Union, Union County.

Drainage area.--183 sq mi.

Records available.--June 1940 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 393.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--20 years (1940-60), 200 cfs.

Extremes.--1940-60: Maximum discharge, 8,690 cfs Nov. 29, 1948 (gage height, 7.61 ft), from rating curve extended above 4,300 cfs by velocity-area studies and logarithmic plotting; minimum, 4.5 cfs Oct. 8, 1954 (gage height, 1.65 ft).

Remarks.--Discharge includes some water diverted from South Pacolet River Reservoir which is discharged into this stream after use.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	124	78.3	140	112	167	227	194	74.3	87.9	50.5	42.6	85.6	115
1952	43.3	68.2	407	160	309	1016	282	125	79.1	68.3	149	79.4	233
1953	56.6	65.7	90.7	285	436	391	139	321	77.6	61.4	35.5	52.3	166
1954	46.6	50.4	273	634	228	367	237	110	76.3	43.6	25.4	9.87	176
1955	11.2	37.5	63.0	107	325	98.6	402	166	61.0	94.6	58.1	29.9	119
1956	50.3	56.5	51.9	62.4	523	409	437	209	79.7	46.8	21.3	158	173
1957	67.0	73.3	139	116	225	257	184	158	101	46.3	30.8	61.8	119
1958	122	585	210	262	270	283	694	319	100	200	96.5	54.1	265
1959	57.0	68.9	116	143	214	316	274	196	333	189	170	378	204
1960	616	216	327	484	923	452	297	213	137	101	150	120	335

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.78	0.48	0.88	0.71	0.95	1.43	1.18	0.47	0.54	0.52	0.27	0.52	8.53
1952	.27	.42	2.56	1.01	1.82	6.40	1.72	.79	.48	.43	.94	.48	17.32
1953	.36	.40	.57	1.80	2.48	2.47	.85	2.02	.47	.39	.22	.32	12.35
1954	.29	.31	1.72	3.99	1.30	2.32	1.45	.69	.47	.27	.16	.06	13.03
1955	.07	.23	.40	.67	1.85	.62	2.46	1.05	.37	.60	.37	.18	8.87
1956	.32	.34	.33	.39	3.08	2.57	2.67	1.31	.49	.30	.13	.96	12.89
1957	.42	.45	.88	.73	1.28	1.61	1.13	.87	.62	.29	.19	.38	8.85
1958	.77	3.57	1.33	1.65	1.54	1.79	4.23	2.01	.61	1.26	.61	.33	19.70
1959	.36	.42	.73	.90	1.22	1.99	1.67	1.23	2.03	1.19	1.07	2.31	15.12
1960	3.88	1.32	2.06	3.04	5.44	2.85	1.81	1.34	.84	.64	.95	.73	24.90

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	-	128	9.50
1951	1203	1,200	Oct. 20, 1950	14	115	0.628	8.53	130	9.64	
1952	1233	6,010	Mar. 4, 1952	34	233	1.27	17.32	207	15.40	
1953	1273	3,710	May 2, 1953	19	166	.907	12.35	180	13.34	
1954	1333	4,140	Jan. 17, 1954	7.0	176	.962	13.03	154	11.41	
1955	1393	2,850	Feb. 6, 1955	5.0	119	.650	8.87	123	9.16	
1956	1433	3,710	Mar. 17, 1956	12	173	.945	12.89	184	13.65	
1957	1503	1,010	Apr. 9, 1957	17	119	.650	8.85	172	12.77	
1958	1553	4,430	Nov. 19, 1957	42	265	1.45	19.70	209	15.54	
1959	1623	4,650	Sept. 30, 1959	49	204	1.11	15.12	281	20.87	
1960	1703	3,370	Feb. 7, 1960	67	335	1.83	24.90	-	-	

a Maximum peak discharge; maximum discharge during year, 4,540 cfs at 12:01 a.m. Oct. 1, stage falling.

1605. Enoree River near Enoree, S. C.

Location.--Lat 34°36', long 81°54', on left bank at upstream side of bridge on State Highway 49 (revised), three-quarters of a mile upstream from Warrior Creek and 4 miles southeast of Enoree, Spartanburg County.

Drainage area.--307 sq mi.

Records available.--August 1929 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 448.13 ft above mean sea level, datum of 1929, supplementary adjustment of 1958 and 1959. Prior to Nov. 20, 1929, staff gage at same site and datum.

Average discharge.--31 years (1929-60), 405 cfs.

Extremes.--1929-60: Maximum discharge, 30,000 cfs Oct. 2, 1929 (gage height, 10.5 ft, from floodmark), from rating curve extended above 17,000 cfs by logarithmic plotting; minimum, 8 cfs Oct. 5, 1941; minimum daily, 20 cfs Oct. 2-4, 7, 1954.

Remarks.--Some regulation at low and medium flow by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	264	165	344	219	280	388	386	202	268	151	148	241	254
1952	112	167	775	339	540	1,805	517	349	247	237	440	185	478
1953	165	168	199	561	882	673	358	475	272	203	122	159	350
1954	150	138	486	1,014	346	521	443	256	212	111	57.4	31.1	315
1955	35.1	104	180	219	513	228	456	325	177	182	118	85.5	215
1956	146	147	144	150	860	618	728	345	175	143	78.6	299	316
1957	152	179	232	254	472	540	492	287	226	117	111	190	269
1958	290	913	447	548	522	569	1,125	735	349	509	241	171	534
1959	162	173	236	292	379	459	578	402	364	424	190	506	346
1960	939	426	493	807	1,389	826	714	460	344	268	333	251	602

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.99	0.60	1.29	0.82	0.95	1.45	1.41	0.76	0.97	0.57	0.56	0.88	11.25
1952	.42	.61	2.90	1.27	1.90	6.78	1.87	1.31	.90	.89	1.65	.87	21.17
1953	.82	.61	.75	2.11	2.99	2.52	1.30	1.79	.99	.76	.46	.58	15.48
1954	.56	.50	1.82	3.80	1.18	1.96	1.61	.96	.77	.42	.22	.11	13.91
1955	.13	.38	.68	.82	1.74	.86	1.58	1.22	.64	.68	.44	.31	9.48
1956	.55	.53	.54	.56	3.02	2.32	2.64	1.29	.64	.54	.30	1.09	14.02
1957	.57	.65	.87	.95	1.60	2.03	1.78	1.08	.82	.44	.42	.69	11.90
1958	1.09	3.31	1.68	2.06	1.77	2.13	4.08	2.76	1.27	1.91	.90	.62	23.58
1959	.61	.63	.89	1.10	1.28	1.73	2.10	1.51	1.33	1.59	.71	1.84	15.32
1960	3.53	1.55	1.86	3.03	4.88	3.10	2.60	1.73	1.25	1.01	1.24	.91	26.69

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	310	13.73
1951	1203	1,960	Dec. 8, 1950	47	254	0.827	11.25	278	12.30
1952	1233	6,960	Mar. 29, 1952	61	478	1.56	21.17	454	19.22
1953	1273	4,110	Feb. 22, 1953	51	350	1.14	15.48	371	16.38
1954	1333	6,120	Jan. 17, 1954	21	315	1.03	13.91	276	12.22
1955	1383	4,010	Feb. 7, 1955	20	215	.700	9.48	225	9.91
1956	1433	5,670	Mar. 17, 1956	32	316	1.03	14.02	327	14.49
1957	1503	2,350	Mar. 1, 1957	47	269	.876	11.90	360	15.89
1958	1553	6,430	Nov. 19, 1957	77	534	1.74	23.58	444	19.63
1959	1623	3,610	May 25, 1959	86	346	1.13	15.32	455	20.13
1960	1703	5,970	Feb. 6, 1960	145	602	1.96	26.69	-	-

1615. Broad River at Richtex, S. C.

Location.--Lat 34°11'05", long 81°11'48", on right bank 0.8 mile west of Richtex, Fair-Field County, 1.2 miles upstream from Little River, and 11 miles downstream from Parr Shoals Dam.

Drainage area.--4,850 sq mi, approximately.

Records available.--October 1925 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 184.84 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--35 years (1925-60), 5,920 cfs.

Extremes.--1925-60: Maximum discharge, 228,000 cfs Oct. 3, 1929 (gage height, 30.7 ft, from floodmarks), on basis of computation of flow over Parr Shoals Dam; minimum daily, 149 cfs Oct. 13, 1935, Sept. 2, 1957.

Remarks.--Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff. Records of chemical analyses and water temperatures for the period October 1958 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,902	2,799	5,408	3,363	4,683	6,243	6,644	3,186	3,227	2,456	2,261	2,673	3,898
1952	1,625	2,465	9,374	5,203	8,773	25,340	6,839	4,297	3,111	2,377	4,781	2,819	6,433
1953	1,937	2,160	2,668	7,414	11,580	9,925	4,143	6,116	3,408	2,298	1,748	2,803	4,644
1954	1,769	1,814	6,265	13,910	5,625	8,309	7,615	3,802	2,421	2,062	1,261	767	4,643
1955	725	1,448	2,353	3,178	7,320	3,342	7,996	5,064	2,503	3,405	2,507	1,370	3,403
1956	2,205	1,891	1,807	1,864	10,330	8,017	11,440	5,125	2,119	2,030	1,078	3,074	4,211
1957	2,179	2,331	3,381	3,280	7,191	7,461	7,992	4,828	5,727	2,216	2,295	3,370	4,325
1958	4,760	14,340	7,277	8,941	7,854	8,746	16,680	11,710	4,473	6,158	3,890	2,463	8,095
1959	2,426	2,413	4,341	5,471	6,439	7,278	8,729	6,542	6,546	6,356	3,482	7,129	5,582
1960	15,440	6,000	6,741	10,300	24,520	13,370	13,020	6,727	5,039	3,922	4,059	4,083	9,379

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.93	0.64	1.29	0.80	1.01	1.49	1.53	0.76	0.74	0.58	0.54	0.61	10.92
1952	.39	.57	2.22	1.23	1.95	6.02	1.57	1.02	.72	.56	1.14	.65	18.04
1953	.46	.50	.63	1.76	2.49	2.36	.95	1.45	.78	.55	.42	.64	12.99
1954	.42	.42	1.49	3.31	1.21	1.97	1.75	.90	.56	.49	.30	.18	13.00
1955	.17	.33	.56	.76	1.57	.79	1.84	1.20	.58	.61	.60	.31	9.52
1956	.52	.44	.43	.44	2.30	1.90	2.63	1.22	.49	.48	.26	.71	11.82
1957	.52	.54	.80	.78	1.54	1.78	1.84	1.15	1.32	.53	.55	.78	12.13
1958	1.13	3.30	1.73	2.12	1.69	2.08	3.84	2.78	1.03	1.46	.92	.57	22.65
1959	.58	.56	1.03	1.30	1.38	1.73	2.01	1.56	1.51	1.51	.83	1.64	15.64
1960	3.67	1.38	1.60	2.44	5.46	3.18	2.99	1.60	1.16	.93	.96	.94	26.31

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	4,585	12.83
1951	1203	30,600	Dec. 9, 1950	698	3,898	0.804	10.92	4,014	11.24
1952	1233	84,700	Mar. 6, 1952	844	6,433	1.33	18.04	5,866	16.45
1953	1273	42,000	Feb. 23, 1953	962	4,644	.958	12.99	4,906	13.73
1954	1333	64,700	Jan. 24, 1954	422	4,643	.957	13.00	4,192	11.73
1955	1383	43,200	Apr. 15, 1955	232	3,403	.702	9.52	3,519	9.65
1956	1433	42,000	Mar. 18, Apr. 17	269	4,211	.868	11.82	4,378	12.29
1957	1503	31,800	Apr. 7, 1957	149	4,325	.892	12.13	5,863	16.43
1958	1553	55,900	Nov. 21, 1957	721	8,095	1.67	22.65	6,667	18.66
1959	1623	a31,200	Dec. 30, 1958	1,150	5,582	1.15	15.64	7,186	20.12
1960	1703	55,900	(b)	1,970	9,379	1.93	26.31	-	-

a Maximum peak discharge; maximum discharge during year, 48,100 cfs at 12 p.m. Sept. 30, stage rising.

b Oct. 1, 1959, Feb. 7, 1960.

1625. Saluda River near Greenville, S. C.

Location.--Lat 34°50'32", long 82°28'51", on right bank 700 ft (revised) upstream from bridge on U.S. Highway 123 alternate, 1.5 miles downstream from Saluda Lake Dam, 2.6 miles upstream from Georges Creek, and 4.6 miles west of city hall in Greenville, Greenville County.

Drainage area.--293 sq mi.

Records available.--October 1941 to September 1960. Monthly discharge only for some periods, published in WSP 1303. Prior to October 1948, published as "near West Greenville."

Gage.--Water-stage recorder. Altitude of gage is 810 ft (from topographic map).

Average discharge.--19 years (1941-60), 586 cfs.

Extremes.--1941-60: Maximum discharge, 11,000 cfs Oct. 7, 1949 (gage height, 19.38 ft), from rating curve extended above 7,500 cfs on basis of computation of peak flow over dam at Saluda Lake; minimum, 28 cfs Feb. 1, 1956 (gage height, 1.65 ft); minimum daily, 70 cfs Oct. 16, 1954.

Remarks.--Some regulation at low and medium flow by powerplant at Saluda Lake. Capacity of reservoir insufficient to affect monthly figures of runoff. Water is diverted above station for city of Greenville water supply. Sewage effluent discharged into Reedy River below station near Greenville. Records of chemical analyses and water temperatures for the period October 1950 to September 1951 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	475	375	664	415	524	730	734	451	475	319	222	305	474
1952	188	364	959	620	741	1,788	1,070	685	456	330	351	260	652
1953	196	243	324	600	1,031	948	576	691	553	363	273	294	504
1954	227	238	664	1,236	684	787	717	522	360	240	185	113	498
1955	89.8	169	356	335	635	387	645	672	406	356	240	171	370
1956	182	190	189	158	772	564	857	486	252	248	146	136	346
1957	168	252	335	430	812	694	1,075	471	522	332	243	551	487
1958	626	662	925	810	874	890	1,282	1,134	564	687	445	286	773
1959	254	255	302	444	445	468	743	761	874	450	314	702	500
1960	678	559	689	779	1,246	1,015	1,194	669	479	456	538	492	748

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.87	1.43	2.62	1.64	1.86	2.87	2.80	1.78	1.81	1.26	0.87	1.16	21.97
1952	.74	1.38	3.77	2.44	2.73	7.03	4.07	2.70	1.74	1.30	1.38	.99	30.27
1953	.77	.92	1.28	2.36	3.66	3.74	2.20	2.72	2.11	1.43	1.07	1.12	23.58
1954	.89	.91	2.62	4.66	2.43	3.10	2.73	2.05	1.37	.94	.73	.43	23.06
1955	.35	.64	1.41	1.31	2.26	1.52	2.46	2.64	1.55	1.41	.94	.65	17.14
1956	.72	.72	.74	.62	2.84	2.21	3.26	1.91	.96	.98	.57	.52	16.05
1957	.66	.96	1.31	1.70	2.88	2.73	4.10	1.86	1.99	1.30	.96	2.10	22.55
1958	2.47	3.28	3.25	3.18	3.10	3.50	4.89	4.46	2.14	2.70	1.75	1.09	35.81
1959	1.00	.97	1.19	1.75	1.58	1.84	2.83	3.00	3.32	1.78	1.23	2.68	23.17
1960	3.46	2.13	2.71	3.07	4.58	3.99	4.55	2.63	1.82	1.80	2.12	1.87	34.73

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	643	29.82
1951	1233	3,080	Dec. 8, 1950	150	474	1.62	21.97	473	21.94
1952	1233	5,560	Mar. 23, 1952	107	652	2.23	30.27	589	27.35
1953	1273	4,360	Feb. 22, 1953	158	504	1.72	23.38	535	24.83
1954	1333, 1383	8,040	Jan. 23, 1954	96	498	1.70	23.06	454	21.04
1955	1383	3,700	Feb. 7, 1955	70	370	1.26	17.14	365	16.92
1956	1433	3,460	Apr. 16, 1956	97	346	1.18	16.05	362	16.80
1957	1503	4,780	Apr. 6, 1957	111	487	1.66	22.55	617	28.62
1958	1553	2,970	Apr. 29, 1958	177	773	2.64	35.81	647	29.97
1959	1623	3,580	June 1, 1959	115	500	1.71	23.17	611	28.31
1960	1703	3,520	Mar. 31, 1960	265	748	2.55	34.73	-	-

1630. Saluda River near Pelzer, S. C.

Location (revised).--Lat 34°40'05", long 82°27'55", on right bank 0.4 mile downstream from Hurricane Creek and 1.9 miles north of Pelzer, Anderson County.

Drainage area.--405 sq mi.

Records available.--September 1929 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 727.75 ft above mean sea level, unadjusted. Prior to Sept. 25, 1929, staff gage at same site and datum.

Average discharge.--31 years (1929-60), 763 cfs.

Extremes.--1929-60: Maximum discharge, 13,600 cfs Oct. 7, 1949 (gage height, 10.53 ft); minimum, 2 cfs Sept. 2, 1956, Dec. 21, 1958; minimum gage height, 0.53 ft Sept. 2, 1956; minimum daily discharge, 57 cfs Oct. 17, 1954.

Remarks.--Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff. For diversion by city of Greenville see station near Greenville. Records of chemical analyses and water temperatures for the period October 1953 to September 1954 are published in report of the Geological Survey.

Correction.--In WSP 1303, the momentary maximum discharge for 1949 is listed in error; it should be 6,370 cfs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	598	476	853	496	618	891	923	547	557	386	305	418	589
1952	241	442	1,332	805	993	2,704	1,366	878	606	419	482	325	884
1953	261	327	436	854	1,516	1,232	753	893	683	469	357	383	675
1954	276	285	903	1,725	822	1,038	906	640	441	286	227	139	641
1955	116	236	443	429	846	491	833	792	476	457	307	214	467
1956	248	257	255	222	1,079	793	1,214	652	339	346	195	240	482
1957	246	339	430	551	994	851	1,339	549	585	366	290	629	593
1958	700	1,099	948	975	1,052	1,109	1,876	1,441	696	802	510	349	945
1959	515	317	387	530	586	659	1,077	934	1,110	572	373	896	645
1960	1,232	721	855	1,011	1,732	1,374	1,701	955	700	645	684	607	1,015

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.71	1.32	2.43	1.41	1.59	2.54	2.54	1.56	1.54	1.10	0.87	1.15	19.76
1952	.69	1.22	3.79	2.29	2.64	7.70	3.76	2.50	1.67	1.19	1.37	.89	29.71
1953	.74	.90	1.24	2.43	3.90	3.50	2.08	2.54	1.89	1.34	1.02	1.06	22.64
1954	.79	.79	2.57	4.91	2.11	2.95	2.50	1.92	1.22	.81	.65	.38	21.50
1955	.33	.65	1.26	1.22	2.18	1.40	2.30	2.26	1.32	1.30	.87	.59	15.68
1956	.71	.71	.73	.63	2.87	2.22	3.35	1.86	.93	.98	.55	.66	16.20
1957	.70	.93	1.22	1.57	2.55	2.42	3.69	1.57	1.61	1.04	.83	1.73	19.86
1958	1.99	3.02	2.70	2.78	2.71	3.16	4.62	4.10	1.92	2.28	1.45	.96	31.69
1959	.90	.87	1.10	1.51	1.51	1.88	2.97	2.66	3.06	1.63	1.06	2.47	21.62
1960	3.50	1.99	2.43	2.88	4.62	3.91	4.69	2.72	1.93	1.83	1.95	1.67	34.12

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	812	27.24
1951	1203	4,120	Dec. 8, 1950	156	589	1.45	19.76	596	20.00
1952	1233	8,370	Mar. 24, 1952	158	884	2.18	29.71	801	26.89
1953	1273	5,720	Feb. 22, 1953	190	675	1.67	22.64	713	23.91
1954	1333	9,220	Jan. 24, 1954	88	641	1.58	21.50	585	19.59
1955	1383	4,920	Feb. 7, 1955	57	467	1.15	15.68	464	15.59
1956	1433	5,880	Apr. 16, 1956	96	482	1.19	16.20	504	16.90
1957	1503	5,720	Apr. 6, 1957	151	593	1.46	19.86	738	24.72
1958	1553	4,760	Apr. 29, 1958	194	945	2.33	31.69	801	26.85
1959	1623	4,440	June 1, 1959	111	645	1.59	21.62	795	26.67
1960	1703	5,080	Mar. 31, 1960	381	1,015	2.51	34.12	-	-

1635. Saluda River near Ware Shoals, S. C.

Location.--Lat 34°23', long 82°14', on right bank 2 miles southeast of Ware Shoals, Greenwood County, 2½ miles downstream from Ware Shoals Dam, and 5 miles upstream from Turkey Creek.

Drainage area.--569 sq mi.

Records available.--October 1938 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Altitude of gage is 448 ft (by barometer).

Average discharge.--22 years (1938-60), 944 cfs.

Extremes.--1938-60: Maximum discharge, 20,600 cfs Aug. 13, 1940 (gage height, 20.48 ft), from rating curve extended above 14,000 cfs on basis of computation of peak flow over dam; minimum, 3 cfs Sept. 18, 1939; minimum daily, 11 cfs Oct. 12, 19, 1941.

Remarks.--Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff. For diversion by city of Greenville see station near Greenville.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	701	559	1,117	651	848	1,117	1,248	633	702	502	401	498	747
1952	306	489	1,851	968	1,255	3,884	1,689	1,115	737	558	696	359	1,159
1953	301	356	513	1,110	2,003	1,835	964	1,336	825	607	438	470	890
1954	369	375	1,246	2,260	1,073	1,343	1,194	782	522	373	271	174	833
1955	149	285	528	641	1,156	650	1,055	933	540	585	370	262	592
1956	310	314	323	310	1,544	1,155	1,750	839	412	406	225	535	671
1957	319	438	575	690	1,144	1,092	1,651	653	675	446	365	735	727
1958	836	1,714	1,171	1,274	1,406	1,448	2,093	1,854	839	994	574	428	1,217
1959	393	391	510	676	788	823	1,331	1,101	1,249	670	389	1,105	783
1960	1,635	846	1,017	1,333	2,375	1,613	2,051	1,216	824	726	907	689	1,265

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.42	1.10	2.26	1.31	1.55	2.26	2.44	1.28	1.37	1.02	0.81	0.98	17.80
1952	.62	.96	5.75	1.96	2.39	7.83	3.27	2.26	1.45	1.13	1.41	.70	27.72
1953	.61	.70	1.04	2.25	3.66	3.71	1.89	2.71	1.62	1.23	.89	.92	21.23
1954	.75	.74	2.52	4.58	1.97	2.72	2.34	1.58	1.02	.76	.55	.34	19.87
1955	.30	.56	1.07	1.30	2.11	1.31	2.06	1.89	1.06	1.19	.75	.51	14.11
1956	.63	.62	.65	.63	2.92	2.34	3.44	1.70	.81	.82	.46	1.05	16.07
1957	.65	.86	1.16	1.40	2.09	2.21	3.24	1.33	1.33	.90	.74	1.44	17.35
1958	1.70	3.36	†2.38	2.58	2.57	2.93	4.11	3.76	1.64	2.02	1.16	.84	29.05
1959	.80	.77	1.03	1.37	1.44	1.67	2.61	2.22	2.46	1.36	.79	2.16	18.88
1960	3.31	1.66	2.06	2.70	4.50	3.26	4.02	2.47	1.62	1.48	1.83	1.35	30.26

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	959	22.87
1951	1203	4,740	Dec. 8, 1950	146	747	1.31	17.80	770	18.35
1952	1233	14,100	Mar. 24, 1952	200	1,159	2.04	27.72	1,034	24.74
1953	1273	8,180	Feb. 21, 1953	148	890	1.56	21.23	960	22.89
1954	1333	9,700	Jan. 24, 1954	60	833	1.46	19.87	745	17.79
1955	1383	7,090	Feb. 7 or 8, 1955	36	592	1.04	14.11	591	14.08
1956	1433	9,080	Sept. 26, 1956	61	671	1.18	16.07	704	16.84
1957	1503	5,830	Apr. 7, 1957	171	727	1.28	17.35	926	22.12
1958	1553	10,400	Nov. 19, 1957	170	1,217	2.14	28.05	1,015	24.21
1959	1623	5,070	June 2, 1959	106	783	1.38	18.68	969	23.11
1960	1703	5,970	Oct. 11, 1959	278	1,265	2.22	30.26	-	-

1640. Reedy River near Greenville, S. C.

Location.--Lat 34°48'00", long 82°21'55", on right bank 440 ft (revised) upstream from State Highway bridge, 0.5 mile upstream from Brushy Creek, 2.5 miles upstream from dam at Conestee, and 3.9 miles southeast of city hall in Greenville, Greenville County.

Drainage area.--48.6 sq mi.

Records available.--October 1941 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Altitude of gage is 800 ft (from topographic map).

Average discharge.--19 years (1941-60), 79.1 cfs.

Extremes.--1941-60: Maximum discharge, 3,590 cfs Oct. 7, 1949 (gage height, 7.88 ft), from rating curve extended above 2,000 cfs by velocity-area studies; minimum, 7 cfs Aug. 17, 1953, Aug. 16, Oct. 4, 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	72.0	41.1	95.8	52.3	61.4	103	78.9	41.0	46.7	36.1	53.4	123	67.1
1952	29.4	42.6	172	87.6	106	350	102	66.6	45.2	32.3	50.2	23.8	92.6
1953	24.5	26.2	47.5	96.1	173	96.4	65.3	86.3	46.0	37.6	28.9	39.0	63.0
1954	23.8	25.8	95.3	201	57.1	107	70.8	55.5	39.3	25.3	17.5	14.1	61.4
1955	13.4	23.9	42.6	44.2	94.2	48.0	81.5	83.5	33.3	53.2	25.4	23.2	46.9
1956	34.5	31.6	29.2	28.0	185	118	185	76.0	33.5	51.1	23.4	63.5	70.9
1957	34.1	45.6	58.3	71.0	114	85.8	107	43.9	64.4	31.4	39.8	82.4	64.3
1958	64.9	144	86.3	99.9	119	122	214	159	65.0	38.4	56.7	34.2	105
1959	37.0	35.7	55.8	68.2	80.2	97.7	131	99.7	95.4	106	50.2	115	80.7
1960	188	69.2	90.5	122	191	159	115	81.6	70.6	90.0	68.8	64.4	109

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.71	0.94	2.27	1.24	1.31	2.44	1.81	0.97	1.07	0.86	1.27	2.82	18.71
1952	.70	.98	4.08	2.08	2.35	8.30	2.34	1.58	1.04	.77	1.19	.55	25.96
1953	.58	.60	1.13	2.28	3.71	2.28	1.45	2.05	1.06	.89	.69	.89	17.61
1954	.56	.59	2.26	4.77	1.22	2.54	1.63	1.31	.90	.60	.42	.32	17.12
1955	.32	.55	1.01	1.05	2.02	1.14	1.87	1.98	.76	1.26	.60	.53	13.09
1956	.82	.73	.69	.86	4.11	2.80	4.25	1.80	.77	1.21	.55	1.46	19.85
1957	.81	1.05	1.38	1.68	2.45	2.04	2.46	1.04	1.48	.74	.94	1.90	17.97
1958	1.54	3.30	2.05	2.38	2.55	2.89	4.91	3.77	1.45	2.33	1.35	.79	29.31
1959	.88	.82	1.33	1.57	1.72	2.32	3.01	2.36	2.19	2.51	1.19	2.64	22.54
1960	4.46	1.58	2.14	2.89	4.24	3.77	2.64	1.94	1.62	2.13	1.64	1.48	30.53

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	70.8	19.78
1951	1203	2,860	Sept. 6, 1951	17	67.1	1.38	18.71	70.0	19.55
1952	1233	2,000	Dec. 21, 1951	17	92.6	1.91	25.96	80.3	22.51
1953	1273	1,250	Feb. 20, 1953	10	63.0	1.30	17.61	67.0	18.71
1954	1333	1,580	Jan. 16, 1954	10	61.4	1.26	17.12	55.8	15.59
1955	1383	1,250	Feb. 6, 1955	8	46.9	.965	13.09	48.2	13.45
1956	1433	2,450	Apr. 16, 1956	15	70.9	1.46	19.85	74.5	20.85
1957	1505	1,340	Apr. 5, 1957	11	64.3	1.32	17.97	77.4	21.62
1958	1553	1,880	Nov. 19, 1957	22	105	2.16	29.31	91.1	25.45
1959	1623	1,320	Sept. 7, 1959	22	80.7	1.66	22.54	99.2	27.69
1960	1703	2,560	July 6, 1960	32	109	2.24	30.53	-	-

1650. Reedy River near Ware Shoals, S. C.

Location.--Lat 34°27', long 82°12', on left bank $1\frac{1}{2}$ miles downstream from dam at Boyd's mill, 4.5 miles northeast of Ware Shoals, Greenwood County, and 10.5 miles upstream from Rabon (revised) Creek.

Drainage area.--228 sq. mi.

Records available.--March 1939 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 489 ft (by barometer).

Average discharge.--21 years (1939-60), 293 cfs.

Extremes.--1939-60: Maximum discharge, 9,410 cfs (revised) Aug. 14, 1940 (gage height, 13.32 ft); minimum, 6 cfs Nov. 11, 1946 (gage height, 0.54 ft); minimum daily, 9 cfs July 1, Aug. 23, 1956.

Remarks.--Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff. For diversion into basin by city of Greenville see Saluda River near Greenville.

Revisions.--Revised records for the water years 1940, 1943, 1946, 1949, and 1950, superseding those published in WSP 1303, are given herewith. Revised daily discharges for the periods affected are available and will be published in a subsequent water-supply paper.

Month	Mean	Per square mile	Runoff in inches	Momentary maximum	
				Discharge	Date
August 1940.....	745	-	3.77	-	-
Water year 1939-40..	234	1.03	13.95	9,410	Aug. 14, 1940
Calendar year 1940..	247	-	14.76	-	-
January 1943.....	1,002	-	5.06	-	-
Water year 1942-43..	330	1.45	19.63	6,960	Jan. 19, 29, 1943
Calendar year 1943..	323	-	19.24	-	-
January 1946.....	877	-	4.44	-	-
Water year 1945-46..	394	1.73	23.48	7,380	Jan. 8, 1946
Calendar year 1946..	376	-	22.41	-	-
November 1948.....	746	-	3.65	-	-
Calendar year 1948..	376	-	22.48	-	-
Water year 1948-49..	417	1.83	24.80	7,520	Nov. 29, 1948
Water year 1949-50....	-	-	-	5,370	Oct. 8, 1949

Corrections.--In WSP 1303, the date Sept. 30, 1950, was listed in the Extremes paragraph in error; this date should not be used for minimum discharge.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	215	153	273	196	234	313	342	164	205	114	164	201	214
1952	84.4	122	550	254	407	*1,324	425	261	197	161	349	132	*357
1953	126	118	164	426	650	514	244	384	169	172	126	125	266
1954	105	104	314	736	297	421	354	184	160	101	61.2	45.6	241
1955	40.7	84.7	167	197	414	217	364	212	129	189	133	79.8	184
1956	137	127	109	118	651	509	660	259	146	133	82.7	244	262
1957	141	180	212	242	383	442	464	230	246	121	118	152	241
1958	209	730	369	403	427	483	831	556	235	296	189	128	404
1959	125	123	180	224	312	361	424	283	270	277	109	319	250
1960	694	270	352	539	952	603	523	331	243	223	362	180	438

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.09	0.75	1.38	0.99	1.07	1.58	1.67	0.83	1.00	0.58	0.83	0.98	12.75
1952	.43	.60	2.78	1.28	1.93	*6.70	2.08	1.31	.96	.81	1.76	.65	*21.29
1953	.64	.58	.83	2.16	2.97	2.59	1.19	1.94	.83	.87	.64	.61	15.85
1954	.53	.51	1.59	3.72	1.35	2.13	1.73	.93	.78	.51	.31	.22	14.31
1955	.21	.41	.84	1.00	1.90	1.10	1.78	1.07	.63	.96	.67	.39	10.96
1956	.69	.62	.55	.60	3.08	2.57	3.22	1.31	.71	.67	.42	1.19	15.63
1957	.71	.78	1.07	1.22	1.75	2.24	2.28	1.16	1.20	.61	.60	.74	14.36
1958	1.06	3.57	1.87	2.04	1.95	2.44	4.06	2.81	1.15	1.50	.96	.63	24.04
1959	.63	.60	.91	1.13	1.43	1.82	2.08	1.43	1.32	1.40	.55	1.56	14.86
1960	3.50	1.32	1.78	2.72	4.51	3.04	2.56	1.67	1.19	1.13	1.83	.88	26.13

* Revised.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean
		Discharge	Date					
1950	-	-	-	-	-	-	-	236
1951	1203	2,220	Sept. 8, 1951	10	214	0.939	12.75	224
1952	1233	*6,120	Mar. 5, 1952	12	*357	*1.57	*21.29	*327
1953	1273	3,200	Feb. 22, 1953	22	266	1.17	15.85	276
1954	1333	*4,960	Jan. 17, 1954	14	241	1.06	14.31	221
1955	1383	2,960	Feb. 8, 1955	18	184	.807	10.96	191
1956	1433	3,970	Sept. 27, 1956	9	262	1.15	15.63	274
1957	1503	1,830	Apr. 6, 1957	11	241	1.06	14.36	307
1958	1553	*5,600	Nov. 20, 1957	12	404	1.77	24.04	331
1959	1623	2,130	Sept. 9, 1959	16	250	1.10	14.86	325
1960	1703	3,620	Oct. 11, 1959	15	438	1.92	26.13	-

* Revised.

1665. Lake Greenwood near Chappells, S. C.

Location.--Lat 34°10', long 81°54', at left upstream end of dam on Saluda River, 0.7 mile upstream from Wilson Creek and 2.4 miles west of Chappells, Newberry County.

Drainage area.--1,150 sq mi, approximately.

Records available.--May 1940 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 400.00 ft above mean sea level, datum of 1929 (levels by Dan T. Duncan Engineering Co.); gage readings have been reduced to elevations above mean sea level. Prior to June 11, 1940, staff gage at same site and datum.

Extremes.--1940-60: Maximum contents, about 8,570,000,000 cu ft Mar. 5, 1952 (elevation, 442.02 ft); minimum since normal reservoir level was first reached, 1,350,000,000 cu ft Oct. 16, 1947 (elevation, 424.42 ft).

Remarks.--Lake is formed by earth dam; storage began in May 1940; dam completed in 1940. Usable capacity, about 7,640,000,000 cu ft between elevations 420.0 ft (limit of draw-down) and 440.0 ft (normal operating level) above mean sea level. Dead storage is about 3,500,000,000 cu ft. Figures given herein represent usable contents. Elevation of spillway crest is 415.0 ft and elevation of top of 1½ ft flashboards on top of spillway gates is 441.5 ft above mean sea level. Water is used for generation of power.

Contents, in billions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	5.07	4.16	5.27	5.10	5.69	6.92	7.05	6.62	6.61	5.56	4.45	4.81
1952	4.07	3.95	7.56	6.24	6.42	8.31	7.53	7.52	6.91	6.15	6.45	4.93
1953	3.33	2.36	1.54	4.38	7.95	7.36	6.65	6.64	6.04	5.05	3.23	1.87
1954	1.73	2.62	4.72	7.94	7.10	7.28	7.28	7.27	6.59	6.36	6.03	5.47
1955	5.15	5.00	4.83	5.50	5.60	5.78	6.68	6.78	6.28	6.68	5.68	5.05
1956	5.03	5.24	5.25	5.00	6.84	6.71	7.52	7.46	6.46	5.68	4.47	5.83
1957	5.52	4.80	5.02	4.85	5.98	6.69	6.53	6.94	7.14	6.44	6.14	6.44
1958	6.19	8.07	6.06	6.84	6.36	7.34	7.55	7.12	6.34	6.72	6.47	5.68
1959	4.70	4.38	4.22	3.68	4.10	5.39	7.26	7.55	6.90	6.32	5.71	6.68
1960	6.21	6.36	6.94	7.13	7.57	6.61	7.56	6.50	6.72	6.17	6.12	5.74

1670. Saluda River at Chappells, S. C.

Location.--Lat 34°11', long 81°52', on left bank at downstream side of bridge on State Highway 39 at Chappells, Newberry County, 7 miles downstream from dam at Lake Greenwood and 8½ miles upstream from Little River.

Drainage area.--1,350 sq mi, approximately.

Records available.--October 1926 to September 1960. Monthly discharge only for some periods, published in WSP 1303. Gage-height records collected at practically same site since 1905 are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 363.89 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 1, 1939, at site 300 ft downstream at datum 0.10 ft lower.

Average discharge.--34 years (1926-60), 1,880 cfs.

Extremes.--1926-60: Maximum discharge, 63,700 cfs Oct. 2, 1929 (gage height, 31.5 ft), from rating curve extended above 27,000 cfs on basis of velocity-area studies; minimum, 8 cfs Oct. 29, 1939; minimum daily, 8 cfs Oct. 29, 1939, caused by construction work above station.

Maximum stage known, 35.7 ft (present site and datum) Aug. 26, 1908, from reports of U.S. Weather Bureau.

Remarks.--Flow regulated by Lake Greenwood.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,176	1,175	1,281	1,222	1,285	1,711	2,140	1,104	1,211	1,115	973	683	1,256
1952	671	859	1,704	2,173	2,256	7,261	3,023	1,676	1,373	1,103	1,166	1,096	2,034
1953	1,009	909	1,114	1,235	2,275	3,412	1,952	1,676	1,304	1,280	1,311	1,641	1,641
1954	619	265	1,745	2,965	2,216	2,332	2,276	1,257	1,134	626	437	366	1,341
1955	243	509	690	1,110	2,491	1,181	1,687	1,425	927	694	1,114	570	1,077
1956	515	477	536	679	2,498	2,739	3,089	1,294	1,065	886	751	508	1,246
1957	663	965	1,031	1,369	1,519	2,225	2,676	1,261	1,019	839	581	883	1,249
1958	1,382	3,417	2,988	2,147	2,696	2,389	4,336	3,158	1,505	1,436	1,061	879	2,277
1959	932	706	696	1,427	1,673	1,549	1,437	1,409	2,011	1,331	740	1,407	1,269
1960	3,420	1,443	1,645	3,701	5,564	4,028	2,905	2,325	1,194	1,394	1,606	1,215	2,528

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,490	-
1951	1203	5,430	Apr. 3, 1951	375	1,256	-	-	1,223	-
1952	1233	31,900	Mar. 25, 1952	412	2,034	-	-	2,016	-
1953	1273	6,360	Feb. 25, 1953	312	1,641	-	-	1,608	-
1954	1333	6,320	Jan. 24, 1954	124	1,341	-	-	1,257	-
1955	1383	6,460	Apr. 15, 1955	38	1,077	-	-	1,067	-
1956	1433	12,400	Apr. 18, 1956	43	1,246	-	-	1,341	-
1957	1503	5,590	Apr. 5, 1957	122	1,249	-	-	1,678	-
1958	1553	13,200	Nov. 20, 1957	146	2,277	-	-	1,638	-
1959	1623	5,590	June 3, 1959	209	1,289	-	-	1,624	-
1960	1703	18,300	Feb. 14, 1960	429	2,528	-	-	-	-

1675. Saluda River near Silverstreet, S. C.

Location.--Lat 34°11', long 81°44', on left bank 200 ft upstream from Higgins Ferry Bridge on State Highway 19, 1 mile downstream from Little River, and 2½ miles south of Silverstreet, Newberry County.

Drainage area.--1,620 sq mi, approximately.

Records available.--October 1926 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 345.13 ft above mean sea level, unadjusted. Prior to Oct. 15, 1929, staff gage at same site and datum. Since Mar. 8, 1939, water-stage recorder for station on Lake Murray near Columbia has been used as an auxiliary gage for this station.

Average discharge.--34 years (1926-60), 2,148 cfs.

Extremes.--1926-60: Maximum discharge, 83,800 cfs Oct. 3, 1929 (gage height, 33.97 ft), from rating curve extended above 19,000 cfs on basis of discharge measurements made at Chappells and near Chapin; minimum daily, 49 cfs July 4, 1940.

Remarks.--Flow regulated by Lake Greenwood. Since July 1956 the city of Newberry diverted water above station for municipal supply.

Monthly and yearly mean discharge, in cubic feet per second, of Saluda River near Silverstreet, S. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,235	1,231	1,423	1,256	1,491	2,087	2,528	1,118	1,265	1,193	1,069	782	1,387
1952	633	868	2,123	2,467	2,718	8,483	3,200	1,822	1,479	1,214	1,352	1,176	2,299
1953	1,050	977	1,225	1,601	2,731	3,821	2,114	2,804	1,489	1,345	1,503	1,426	1,820
1954	714	305	2,089	3,502	2,282	2,363	2,587	1,306	1,201	715	455	360	1,488
1955	253	525	952	1,246	2,871	1,279	2,062	1,569	982	965	1,121	618	1,192
1956	565	521	571	735	2,949	3,248	3,886	1,391	1,116	965	782	577	1,433
1957	690	997	1,129	1,388	1,558	2,505	2,845	1,482	1,127	930	660	949	1,352
1958	1,504	4,239	3,500	2,564	3,046	2,786	5,220	3,689	1,577	1,672	1,217	980	2,642
1959	1,012	743	933	1,630	2,065	1,891	1,597	1,546	2,101	1,528	920	1,706	1,467
1960	4,182	1,747	1,933	4,582	7,144	4,691	3,366	2,471	1,216	1,478	1,717	1,416	2,983

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,653	-
1951	1203	6,970	Apr. 4, 1951	319	1,387	-	-	1,365	-
1952	1233	28,400	Mar. 25, 1952	372	2,299	-	-	2,267	-
1953	1273	6,860	Feb. 25, 1953	372	1,820	-	-	1,810	-
1954	1333	7,760	Apr. 2, 1954	160	1,468	-	-	1,370	-
1955	1363	10,400	Apr. 15, 1955	95	1,192	-	-	1,165	-
1956	1433	13,200	Apr. 18, 1956	122	1,433	-	-	1,530	-
1957	1503	6,620	Apr. 6, 1957	163	1,352	-	-	1,872	-
1958	1553	15,400	Nov. 21, 1957	588	2,642	-	-	2,112	-
1959	1623	6,860	Sept. 30, 1959	388	1,467	-	-	1,904	-
1960	1703	21,100	Feb. 14, 1960	396	2,983	-	-	-	-

1685. Lake Murray near Columbia, S. C.

Location.--Lat 34°03'05", long 81°13'15", in intake tower 500 ft upstream from dam on Saluda River and 10 miles upstream from confluence of Saluda and Broad Rivers at Columbia, Richland County.

Drainage area.--2,420 sq mi, approximately.

Records available.--August 1929 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 0.64 ft below mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 31, 1930, staff gage at same site and datum.

Extremes.--1929-60: Maximum contents, about 73,700,000,000 cu ft Apr. 10, 1936 (gage height, 361.51 ft); minimum since generation of power was started, 14,600,000,000 cu ft Dec. 23, 1941 (gage height, 320.96 ft).

Remarks.--Lake is formed by earth dam; storage began Aug. 31, 1929; dam completed in 1930. Usable capacity, 70,300,000,000 cu ft between gage heights 300.0 ft (limit of drawdown) and 360.0 ft (maximum normal lake level). Dead storage, 21,800,000,000 cu ft. Figures given herein represent usable contents. Gage height of one spillway crest (completed in 1946), 330 ft with top of gates 362 ft; gage height of other spillway crest 340 ft with top of gates 365 ft. Water is used for generation of power.

Contents, in billions of cubic feet on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	39.90	35.57	34.78	30.96	31.97	37.04	43.42	41.59	40.47	38.59	31.55	27.66
1952	23.68	20.32	23.74	28.69	35.53	60.12	64.01	60.31	55.04	48.50	44.19	37.90
1953	30.23	24.41	20.10	21.84	29.57	40.90	42.68	45.46	44.78	42.09	36.97	33.34
1954	26.69	19.54	23.91	30.80	34.98	39.92	45.49	46.81	44.70	43.00	37.83	31.95
1955	28.62	26.57	25.77	25.84	30.81	32.41	38.62	40.71	38.22	34.08	30.75	29.46
1956	28.91	27.04	27.27	25.71	32.50	40.43	51.85	53.50	53.96	54.18	49.98	48.30
1957	46.78	44.36	42.46	42.95	45.25	52.68	59.38	65.03	64.92	60.69	57.10	52.15
1958	46.15	50.75	51.66	48.50	49.46	53.45	65.38	63.00	59.92	60.23	56.72	52.41
1959	47.28	42.51	42.37	41.51	48.08	55.94	61.08	64.63	63.71	62.68	57.02	59.57
1960	59.69	54.13	50.14	57.64	62.80	64.28	66.64	65.30	63.95	62.99	59.17	56.01

Santee River Basin

1690. Saluda River near Columbia, S. C.

Location.--Lat 34°00'50", long 81°05'17", on left bank 0.4 mile upstream from site of old Saluda mill, 1.6 miles upstream from confluence with Broad River, and 3.3 miles west of State Capitol in Columbia, Richland County.

Drainage area.--2,510 sq mi, approximately.

Records available.--August 1925 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 149.46 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Sept. 1, 1929, at datum 1.00 ft higher.

Average discharge.--35 years (1925-60), 2,746 cfs.

Extremes.--1925-60: Maximum discharge, 67,000 cfs Oct. 2, 1929 (gage height, 15.22 ft), from rating curve extended above 26,000 cfs on basis of discharge measurements made at Wise Ferry Bridge near Chapin; minimum, 11 cfs July 13, 1930; minimum daily, 12 cfs July 13, 1930, caused by construction work above station.

Remarks.--Flow regulated by Lake Murray and Lake Greenwood.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,622	2,722	1,992	3,006	1,431	1,003	806	1,762	1,856	2,113	3,475	2,351	2,100
1952	2,084	2,217	1,274	1,033	790	1,809	2,310	3,133	3,449	3,368	3,082	3,610	2,349
1953	3,803	3,264	3,027	1,372	969	540	1,606	1,903	2,009	2,317	2,974	3,230	2,259
1954	3,141	3,084	1,118	1,622	791	722	764	803	1,701	1,342	2,463	2,533	1,677
1955	1,419	1,263	1,211	1,493	1,249	848	582	856	1,777	2,579	2,407	1,017	1,393
1956	621	1,209	350	1,332	702	835	622	869	714	751	2,098	1,490	967
1957	1,250	1,754	1,995	1,365	776	654	590	647	1,286	2,220	2,064	3,200	1,485
1958	4,022	3,857	3,699	5,371	4,358	2,684	3,403	5,406	3,009	2,380	2,823	2,649	3,637
1959	2,918	2,527	1,223	2,300	689	601	490	409	2,533	2,867	3,327	2,932	1,909
1960	5,903	3,940	3,655	5,026	8,657	6,332	4,034	3,223	1,839	2,015	3,197	2,681	4,196

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	2,453	-
1951	1203	10,300	Aug. 10, 1951	110	2,100	-	-	1,952	-
1952	1233	10,700	June 12, 1952	120	2,349	-	-	2,729	-
1953	1273	9,600	Sept. 5, 1953	141	2,259	-	-	2,026	-
1954	1333	9,600	Nov. 9, 1953	127	1,677	-	-	1,583	-
1955	1383	9,250	Aug. 19, 1955	125	1,595	-	-	1,248	-
1956	1433	8,080	Aug. 15, 1956	116	967	-	-	1,203	-
1957	1503	10,300	Sept. 3, 1957	161	1,485	-	-	2,040	-
1958	1553	13,100	Jan. 24, 1958	195	3,637	-	-	3,224	-
1959	1623	10,300	Sept. 30, 1959	181	1,909	-	-	2,485	-
1960	1703	13,200	Feb. 13, 1960	238	4,196	-	-	-	-

1695. Congaree River at Columbia, S. C.

Location.--Lat. 33°59'35", long 81°03'00", on right bank at Columbia, Richland County, 1,000 ft downstream from Gervais Street Bridge and 1.4 miles downstream from confluence of Broad and Saluda Rivers.

Drainage area.--7,850 sq mi, approximately.

Records available.--October 1939 to September 1960. Gage-height records collected at site 1,000 ft upstream October 1891 to December 1933 and at present site since January 1934 are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 113.02 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--21 years (1939-60), 8,305 cfs.

Extremes.--1939-60: Maximum discharge, 121,000 cfs Aug. 16, 1940 (gage height, 26.14 ft); minimum, 588 cfs Jan. 19, 1942 (gage height, 0.94 ft); minimum daily, 662 cfs Oct. 18, 1954.

Maximum flood known occurred Aug. 27, 1908, discharge, 364,000 cfs (gage height, 39.8 ft, present datum, at site 1,000 ft upstream, from records of U.S. Weather Bureau) by conveyance-slope study.

Remarks.--Flow regulated by Lake Murray and Lake Greenwood on Saluda River and to some extent, at low and medium flow, by powerplants on Broad River. City of Columbia diverts water above station for municipal supply. Records of chemical analyses and water temperatures for the period October 1958 to September 1960 are published in reports of the Geological Survey.

SANTÉE RIVER BASIN

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Monthly and yearly mean discharge, in cubic feet per second, of Congaree River at Columbia, S. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	4,994	4,723	3,425	4,785	6,710	5,426	4,828	4,085	3,387	2,804	12,260	5,510	5,244
1941	4,047	6,567	8,515	5,339	4,290	5,241	5,267	3,624	4,777	16,730	6,067	5,160	6,328
1942	4,764	6,335	7,712	4,185	10,590	15,270	7,840	6,241	7,056	7,933	7,525	5,960	7,602
1943	5,036	5,249	7,638	17,480	11,000	12,360	10,480	7,976	7,526	15,090	6,836	6,057	9,404
1944	5,193	5,236	5,465	7,639	12,870	24,740	20,000	10,640	8,519	5,206	6,446	4,853	9,717
1945	7,078	5,776	4,792	5,766	10,680	7,881	6,728	4,465	4,423	6,881	6,125	19,250	7,444
1946	5,232	4,490	14,420	17,770	15,390	11,350	10,860	11,830	7,539	8,161	8,742	6,714	10,200
1947	8,389	6,857	6,838	15,980	7,308	9,838	7,657	4,601	5,984	5,719	5,965	5,523	7,568
1948	9,527	16,160	10,980	11,840	19,420	17,320	16,180	7,963	7,026	5,483	9,224	7,562	11,510
1949	6,257	14,280	18,080	14,020	17,680	11,100	11,850	13,170	7,394	9,134	18,550	13,840	12,910
1950	13,480	12,970	7,691	6,895	7,931	8,970	7,484	5,990	6,126	6,422	7,035	8,025	8,437
1951	6,597	5,664	7,777	6,747	6,539	7,864	8,474	5,038	5,260	4,605	5,842	5,134	6,295
1952	3,677	4,666	10,770	6,263	10,190	28,430	9,933	7,815	6,735	5,789	8,283	6,796	9,130
1953	5,766	5,482	5,819	9,194	13,240	11,160	6,107	8,495	5,359	4,455	4,534	6,060	7,104
1954	4,778	4,853	7,549	15,680	6,256	9,211	8,621	4,405	3,969	3,210	3,475	5,019	6,266
1955	1,982	2,461	3,519	4,631	8,413	4,074	8,811	5,793	4,055	5,840	4,886	2,203	4,677
1956	2,690	2,924	1,945	2,967	11,040	8,942	12,460	6,147	2,591	2,567	2,966	4,338	5,094
1957	3,251	3,853	5,251	4,483	7,819	8,392	8,462	5,621	7,011	4,083	4,165	6,239	5,695
1958	8,530	18,680	11,040	14,750	12,420	12,170	20,150	17,530	7,278	8,979	6,507	4,818	11,890
1959	5,085	4,776	5,225	7,786	7,614	8,497	9,593	6,755	9,001	9,937	6,704	9,971	7,570
1960	22,950	10,130	10,580	16,390	34,910	20,590	18,750	10,430	7,229	6,324	7,596	6,982	14,330

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1940	1553	121,000	Aug. 16, 1940	850	5,244	-	-	5,746	-		
1941	1553	52,000	July 18, 1941	1,010	6,328	-	-	6,301	-		
1942	1553	52,400	Feb. 19, 1942	1,040	7,602	-	-	7,529	-		
1943	1553	63,400	Jan. 20, 1943	1,810	9,404	-	-	9,232	-		
1944	1553	105,000	Mar. 21, 1944	1,430	9,717	-	-	9,864	-		
1945	1553	102,000	Sept. 20, 1945	1,810	7,444	-	-	7,999	-		
1946	1553	62,200	Jan. 9, 1946	2,240	10,200	-	-	10,020	-		
1947	1553	63,400	Jan. 21, 1947	1,880	7,568	-	-	8,782	-		
1948	1553	54,400	Feb. 14, 1948	1,840	11,510	-	-	11,680	-		
1949	1553	116,000	Nov. 30, 1948	2,300	12,910	-	-	12,550	-		
1950	1553	50,200	Oct. 9, 1949	2,430	8,437	-	-	7,242	-		
1951	1553	32,000	Dec. 9, 1950	1,480	6,295	-	-	6,219	-		
1952	1553	91,400	Mar. 6, 1952	1,300	9,130	-	-	8,954	-		
1953	1553	43,500	Feb. 23, 1953	1,380	7,104	-	-	7,115	-		
1954	1553	65,200	Jan. 25, 1954	845	6,266	-	-	5,471	-		
1955	1553	47,000	Apr. 15, 1955	662	4,677	-	-	4,660	-		
1956	1553	43,100	Apr. 18, 1956	770	5,094	-	-	5,498	-		
1957	1553	31,000	Apr. 7, 1957	825	5,695	-	-	7,855	-		
1958	1553	64,000	May 1, 1958	1,860	11,890	-	-	9,861	-		
1959	1623	83,100	June 3, 1959	1,070	7,570	-	-	9,983	-		
1960	1703	65,200	Oct. 1, 1959	2,560	14,330	-	-	-	-		

a Maximum peak discharge; maximum discharge during year, 53,900 cfs at 12 p.m. Sept. 30, 1959, stage rising.

1695.5. Congaree Creek at Cayce, S. C.

Location--Lat 33°56'15", long 81°04'40", on left bank 50 ft downstream from bridge on U.S. Highway 21 at Cayce, Lexington County, 2 miles upstream from Sixmile Creek.

Drainage area--136 sq mi.

Records available--October 1959 to September 1960.

Gage--Water-stage recorder and surface follower. Datum of gage is 128.975 ft above mean sea level (South Carolina Highway Department bench mark). Prior to Jan. 20, 1960, staff gage at same site and datum.

Extremes--1959-60: Maximum discharge, 1,600 cfs Oct. 1, 1959 (gage height, 5.92 ft, from floodmarks), from rating curve extended above 920 cfs by velocity-area studies; minimum, 159 cfs July 22, 1960 (gage height, 2.22 ft); minimum daily, 163 cfs July 20, 1960.

Remarks--About 1 cfs diverted by city of Cayce for municipal supply.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	462	303	283	322	392	338	388	257	216	221	223	208	301

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	3.92	2.49	2.40	2.73	3.11	2.87	3.18	2.18	1.77	1.87	1.89	1.71	30.12

1705. Lakes Marion-Moultrie diversion canal near Pineville, S. C.

Location.--Lat 33°23'15", long 80°08'25", on right bank 0.6 mile upstream from bridge on State Highway 45 and 7.0 miles southwest of Pineville, Berkeley County.

Records available.--October 1943 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 60.0 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by South Carolina Public Service Authority). Auxiliary water-stage recorder 3.9 miles downstream from base gage.

Average discharge.--17 years (1943-60), 13,760 cfs.

Extremes.--1943-60: Maximum daily discharge, 40,200 cfs Mar. 10, 1952; minimum daily discharge (normal operation), 61 cfs Sept. 24, 25, 1956; maximum daily reverse flow, 12,100 cfs Feb. 9, 1947 (caused by unusual operation of gates).

Remarks.--Canal diverts water from Lake Marion to Lake Moultrie for generation of power and for navigation. Water is discharged from powerplant and navigation lock into West Branch Cooper River.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	9,735	11,120	13,540	13,110	13,730	12,440	13,320	11,500	10,530	9,438	9,773	8,596	11,390
1952	6,300	6,234	10,060	11,830	14,860	26,110	21,750	14,330	12,890	10,930	11,680	13,200	13,340
1953	12,510	11,450	12,160	11,120	14,560	24,040	18,120	13,300	8,322	7,275	11,670	10,580	12,920
1954	8,722	8,046	12,330	17,170	18,520	18,470	16,980	11,050	10,890	8,105	3,686	3,253	11,400
1955	5,115	4,676	5,434	9,242	10,400	9,324	12,760	9,811	9,381	6,511	5,207	6,200	7,643
1956	9,300	5,876	4,363	4,932	11,430	15,930	17,970	14,500	6,318	6,148	4,858	3,566	8,903
1957	4,878	8,094	7,295	7,706	13,950	14,690	15,950	9,832	14,140	11,630	6,579	6,482	10,140
1958	7,832	15,600	23,960	21,430	23,350	25,990	27,210	23,500	14,650	13,500	11,860	8,936	18,120
1959	7,537	7,720	7,948	12,450	18,190	18,830	18,660	12,130	15,710	16,920	17,510	15,210	14,030
1960	21,920	19,960	20,160	25,920	27,320	28,200	25,820	20,490	11,690	9,523	13,130	13,990	19,820

1710. Lake Marion near Pineville, S. C.

Location.--Lat 33°27'00", long 80°09'50", at right upstream end of spillway, 2.8 miles upstream from old Santee Canal, 5.4 miles upstream from Dead River, and 8 miles west of Pineville, Berkeley County.

Drainage area.--14,700 sq mi, approximately.

Records available.--January 1942 to September 1960. Prior to October 1942, published as Santee Reservoir near Pineville.

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Harza Engineering Co.). Prior to May 6, 1942, staff gage at same site and datum.

Extremes.--1942-60: Maximum contents, about 48,730,000,000 cu ft Mar. 11, 1952; maximum elevation, 77.12 ft Mar. 11, 1952 (caused by high wind); minimum contents, 2,062,000,000 cu ft Oct. 17, 1951 (elevation, 61.36 ft).

Remarks.--Lake is formed by earth dam. Storage began in November 1941; dam completed in 1941. Usable capacity, 47,930,000,000 cu ft between elevations 60.0 ft (limit of drawdown) and 76.8 ft, revised (maximum normal lake elevation). Dead storage, about 15,250,000,000 cu ft. Figures given herein represent usable contents. Elevation of spillway crest, 63.0 ft; top of spillway gates, 76.8 ft. Some water used for generation of power. Major portion of water is diverted from Lake Marion through canal to Lake Moultrie for generation of power and for navigation.

Contents, in billions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	25.06	22.30	23.10	20.84	19.67	22.68	29.90	23.96	18.82	11.71	7.51	4.49
1952	2.25	3.79	13.40	12.43	25.96	48.07	40.67	40.98	34.90	27.97	31.15	37.65
1953	27.30	17.41	7.85	19.43	41.43	46.98	35.26	37.70	34.78	32.88	20.92	16.16
1954	13.36	11.48	16.61	40.18	30.49	29.67	33.04	27.16	15.92	7.75	8.57	8.88
1955	7.59	5.27	7.35	5.32	13.69	9.57	19.17	19.00	10.70	16.80	22.91	20.28
1956	9.61	6.61	5.15	5.27	23.67	28.78	36.51	27.97	17.78	12.21	11.82	15.30
1957	19.81	15.55	18.18	19.81	24.82	32.08	38.37	37.87	40.45	24.37	22.56	29.90
1958	39.34	46.93	40.54	47.07	44.22	42.69	43.45	44.55	40.49	41.17	39.09	29.97
1959	27.78	25.49	22.84	39.08	36.85	37.65	41.43	39.26	37.53	45.80	34.62	16.36
1960	46.36	42.51	42.78	45.69	46.93	47.21	46.22	40.72	40.81	42.51	41.17	32.52

† Corrected.

1715. Santee River near Pineville, S. C.

Location.--Lat 33°27'15", long 80°09'25", on right bank 2.4 miles downstream from Lake Marion Dam, 3.0 miles upstream from Dead River, and 6.7 miles west of Pineville, Berkeley County.

Drainage area.--14,700 sq mi, approximately.

Records available.--April 1942 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 23.00 ft above mean sea level (levels by South Carolina Public Service Authority). Prior to Feb. 25, 1943, staff gage at site 2.2 miles upstream or temporary water-stage recorder operated by Corps of Engineers, at site 200 ft upstream, at different datum.

Average discharge.--18 years (1942-60), 2,258 cfs.

Extremes.--1942-60: Maximum discharge, 155,000 cfs Sept. 23, 1945 (gage height, 31.1 ft, from floodmarks), from rating curve extended above 13,000 cfs by computation of flow over spillway at Lake Marion and by logarithmic plotting; minimum daily, 9 cfs Feb. 23, 1947 (caused by repair work at spillway).

Remarks.--Flow completely regulated by Lake Marion. Water is diverted above station from Lake Marion through canal into Lake Moultrie for generation of power and for navigation, then discharged into Cooper River basin. Seepage from north dike of Lake Marion Dam bypasses station via Little River. Records of chemical analyses and water temperatures for the period October 1951 to September 1952 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	493	499	532	510	558	540	516	527	538	494	513	518	520
1952	504	508	544	548	568	17,000	2,838	662	690	636	572	522	2,152
1953	503	447	497	516	558	913	715	616	538	521	524	512	572
1954	497	500	505	507	543	538	560	551	522	483	471	485	513
1955	495	528	533	529	502	500	525	521	510	517	523	532	518
1956	517	487	498	491	502	506	540	529	507	491	494	470	503
1957	514	506	486	484	485	507	528	523	510	501	486	511	504
1958	499	5,599	6,458	1,298	3,704	790	8,031	14,820	518	589	612	570	3,623
1959	582	514	504	548	481	556	502	526	511	1,176	528	517	580
1960	21,120	2,652	687	2,219	36,010	12,430	15,520	662	595	575	567	607	7,682

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	538	-
1951	1203	617	June 24, 1951	435	520	-	-	522	-
1952	1233	89,900	Mar. 11, 1952	408	2,152	-	-	2,143	-
1953	1273	2,830	Mar. 25, 1953	403	572	-	-	576	-
1954	1333	1,140	Apr. 17, 1954	423	513	-	-	518	-
1955	1383	653	(a)	165	518	-	-	514	-
1956	1433	744	Apr. 7, 1956	200	503	-	-	503	-
1957	1503	989	Apr. 6, 1957	294	504	-	-	1,428	-
1958	1553	59,700	Nov. 30, 1957	354	3,623	-	-	2,706	-
1959	1623	6,840	July 27, 1959	430	580	-	-	2,516	-
1960	1703	69,300	Feb. 18, 1960	475	7,682	-	-	-	-

a Oct. 15, 1954, Sept. 8, 1955.

1720. Lake Moultrie near Pinopolis, S. C.

Location.--Lat 33°14'40", long 79°59'30", at powerplant 0.7 mile upstream from Atlantic Coast Line Railroad bridge and 2.8 miles northeast of Pinopolis, Berkeley County.

Records available.--January 1942 to September 1960. Prior to October 1942, published as Pinopolis Reservoir near Pinopolis.

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Harza Engineering Co.). Prior to May 16, 1942, staff gage at same site and datum.

Extremes.--1942-60: Maximum contents, about 31,490,000,000 cu ft Oct. 15, 1959; maximum elevation, 76.21 ft Oct. 14, 1959 (caused by high wind); minimum contents, 1,784,000,000 cu ft below normal limit of drawdown Dec. 21, 1951 (elevation, 58.52 ft).

Remarks.--Lake is formed by earth dikes and dam, with concrete navigation lock; dikes and dam completed in 1941. Storage began in November 1941. Water is diverted through canal from Lake Marion and discharged through tailrace canal into West Branch Cooper River. Usable capacity, 33,170,000,000 cu ft between elevations 60.0 ft (normal limit of drawdown) and 76.8 ft, revised (maximum normal elevation). Dead storage, about 19,600,000,000 cu ft. Figures given herein represent usable contents. Water is used for generation of power and for navigation.

Contents, in billions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	18.58	16.05	16.75	14.65	13.93	16.28	21.68	17.34	13.49	7.91	3.74	2.20
1952	1.15	.53	3.81	6.92	18.34	27.70	26.49	28.74	25.20	19.91	21.78	26.59
1953	19.30	12.67	4.22	13.81	23.78	29.38	25.20	27.34	25.25	23.78	15.44	11.20
1954	10.44	8.65	10.28	17.88	21.59	19.01	23.53	20.07	11.32	5.93	6.97	7.10
1955	6.24	4.33	5.66	1.00	10.20	5.93	13.79	13.99	8.02	13.21	17.77	15.48
1956	7.33	5.30	3.84	4.08	17.01	20.43	25.12	20.41	13.75	9.58	9.36	12.33
1957	14.99	11.03	13.97	15.25	17.79	22.83	26.80	26.75	29.50	18.21	17.10	22.51
1958	27.80	29.19	27.18	28.53	28.92	27.16	27.80	29.48	28.66	28.03	27.59	22.25
1959	20.61	19.46	16.95	27.03	25.17	25.64	27.70	27.39	26.80	29.03	24.73	26.69
1960	30.78	28.53	28.16	28.53	28.74	28.77	30.15	28.13	28.61	29.62	28.58	23.56

1725. South Fork Edisto River near Montmorenci, S. C.

Location.--Lat 33°34'35", long 81°30'50", near center of span on downstream side of bridge on State Highway 215, 0.4 mile upstream from Cedar Creek, 1 mile upstream from Shaw Creek, and 7.6 miles northeast of Montmorenci, Aiken County.

Drainage area.--198 sq mi.

Records available.--October 1939 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 250.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers). Prior to Oct. 29, 1954, wire-weight gage at same site and datum.

Average discharge.--21 years (1939-60), 229 cfs.

Extremes.--1939-60: Maximum discharge, 3,120 cfs Oct. 1, 1959 (gage height, 9.57 ft), from rating curve extended above 2,300 cfs by logarithmic plotting; minimum, 37 cfs July 4, Sept. 26, 1954 (gage height, 1.00 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	186	189	237	232	247	285	311	153	182	166	132	149	205
1952	144	193	260	243	337	564	340	193	144	116	134	129	233
1953	118	146	163	224	332	360	213	339	179	139	108	223	211
1954	135	139	319	243	197	203	207	153	102	77.3	78.9	70.7	161
1955	74.9	115	144	193	205	166	266	135	92.9	114	109	96.9	142
1956	105	126	125	138	250	263	278	138	75.5	74.8	76.5	110	146
1957	118	108	158	161	159	201	182	206	128	83.8	82.2	101	141
1958	134	246	325	336	353	358	496	267	149	175	112	121	255
1959	121	125	172	227	316	376	303	291	173	218	174	251	229
1960	634	396	341	467	770	508	608	313	232	200	211	183	404

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.08	1.07	1.38	1.35	1.30	1.68	1.75	0.89	1.03	0.97	0.77	0.84	14.09
1952	.84	1.09	1.51	1.42	1.83	3.29	1.92	1.12	.81	.68	.78	.73	16.02
1953	.69	.82	.95	1.30	1.75	2.10	1.20	1.97	1.01	.81	.63	1.26	14.49
1954	.79	.78	1.86	1.42	1.04	1.19	1.17	.89	.57	.45	.46	.40	11.02
1955	.44	.65	.84	1.12	1.08	.97	1.50	.79	.52	.66	.64	.55	9.76
1956	.61	.71	.73	.80	1.36	1.53	1.56	.80	.43	.44	.44	.62	10.03
1957	.69	.61	.92	.94	.84	1.18	1.03	1.20	.72	.49	.48	.57	9.67
1958	.78	1.38	1.89	1.96	1.85	2.09	2.80	1.56	.84	1.02	.65	.88	17.50
1959	.70	.70	1.00	1.33	1.67	2.19	1.71	1.70	.98	1.27	1.01	1.42	15.68
1960	3.69	2.23	1.98	2.72	4.20	2.96	3.42	1.82	1.30	1.16	1.23	1.03	27.74

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	214	14.69
1951	1203	615	Apr. 5, 1951	94	205	1.04	14.09	204	14.00
1952	1233	2,040	Mar. 6, 1952	86	233	1.18	16.02	219	15.04
1953	1273	1,400	May 8, Sept. 28	84	211	1.07	14.49	225	15.46
1954	1333	858	Dec. 15, 1953	40	161	.813	11.02	139	9.52
1955	1383	1,790	Apr. 16, 1955	61	142	.717	9.76	144	9.88
1956	1433	755	Apr. 13, 1956	48	146	.737	10.03	149	10.20
1957	1503	750	May 14, 1957	48	141	.712	9.67	167	11.50
1958	1553	1,560	Apr. 18, 1958	85	255	1.29	17.50	231	15.85
1959	1623	1,990	May 10, 1959	96	229	1.16	15.68	309	21.18
1960	1703	3,120	Oct. 1, 1959	149	404	2.04	27.74	-	-

1730. South Fork Edisto River near Denmark, S. C.

Location.--Lat 33°23'35", long 81°08'00", on left bank at downstream side of bridge on U.S. Highway 321, 200' ft downstream from Seaboard Air Line Railroad bridge, 1.8 miles downstream from Little River, and 4.8 miles north of Denmark, Bamberg County.

Drainage area.--720 sq mi, approximately.

Records available.--August 1931 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 155.68 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers). Prior to Oct. 27, 1931, chain gage at same site and datum.

Average discharge.--29 years (1931-60), 750 cfs.

Extremes.--1931-60: Maximum discharge, 13,500 cfs Apr. 11, 1936 (gage height, 10.91 ft), from rating curve extended above 5,200 cfs on basis of velocity-area studies and logarithmic plotting; minimum, 146 cfs Aug. 12, 1956.
Maximum flood known since at least 1893, 11.7 ft in October 1929, on basis of information from State Highway Department (discharge, 17,100 cfs, by conveyance-slope study).

Remarks.--Records of chemical analyses and water temperatures for the period October 1950 to September 1951 and of water temperatures for the period November 1956 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	500	537	721	741	718	880	923	430	475	440	442	410	599
1952	364	572	684	598	898	1,656	914	573	501	341	482	437	667
1953	374	494	585	781	977	1,326	825	895	412	441	348	616	653
1954	693	474	1,146	894	642	711	890	478	376	250	249	236	571
1955	250	358	492	644	669	544	676	385	406	374	316	347	453
1956	348	386	456	446	838	907	819	476	233	239	246	275	471
1957	475	373	484	552	555	641	636	578	433	275	238	299	461
1958	429	657	1,040	914	1,113	1,179	1,695	993	412	505	308	306	794
1959	326	364	511	694	1,142	1,328	1,034	795	507	669	512	639	707
1960	2,436	1,597	1,471	1,546	2,688	1,771	2,088	843	629	572	611	555	1,396

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.80	0.83	1.15	1.19	1.04	1.37	1.43	0.69	0.74	0.70	0.71	0.63	11.28
1952	.58	.89	1.10	.96	1.33	2.65	1.42	.92	.78	.55	.77	.68	12.63
1953	.60	.77	.94	1.22	1.42	2.12	.97	1.43	.64	.71	.56	.96	12.34
1954	1.11	.73	1.83	1.43	.93	1.14	1.07	.77	.58	.40	.40	.37	10.76
1955	.40	.55	.79	1.03	.97	.87	1.05	.62	.63	.60	.51	.54	8.56
1956	.56	.60	.73	.71	1.25	1.45	1.27	.76	.36	.38	.39	.43	8.89
1957	.76	.58	.77	.88	.80	1.03	.99	.93	.67	.44	.38	.46	8.69
1958	.69	1.02	1.66	1.46	1.61	1.89	2.62	1.59	.64	.81	.49	.47	14.95
1959	.52	.56	.82	1.11	1.66	2.12	1.61	1.27	.79	1.07	.82	.99	13.54
1960	3.90	2.48	2.35	2.48	4.02	2.84	3.24	1.35	.98	.92	.98	.86	26.40

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	616	11.60
1951	1203	1,320	Apr. 2, 1951	274	599	0.832	11.28	567	11.07
1952	1233	2,390	Mar. 26, 1952	245	667	.926	12.63	653	12.37
1953	1273	2,600	Sept. 29, 1953	272	653	.907	12.34	726	13.70
1954	1333	al, 750	Dec. 16, 1953	171	571	.793	10.76	468	8.83
1955	1383	1,640	Apr. 20, 1955	220	453	.629	8.56	461	8.71
1956	1433	1,350	Feb. 8, 1956	156	471	.654	8.89	483	9.11
1957	1503	1,030	Mar. 27, 1957	167	461	.640	8.69	528	9.95
1958	1553	3,210	Apr. 17, 1958	220	794	1.10	14.95	716	13.48
1959	1623	2,810	May 14, 1959	255	707	.982	13.54	1,069	20.17
1960	1703	5,150	Apr. 6, 1960	445	1,396	1.94	26.40	-	-

a Maximum peak discharge; maximum discharge during year, 2,010 cfs at 12:01 a.m. Oct. 1, stage falling.

1735. North Fork Edisto River at Orangeburg, S. C.

Location.--Lat 33°29'00", long 80°52'25", on left bank under bridge on U.S. Highway 301 at Orangeburg, Orangeburg County, 0.5 mile upstream from Atlantic Coast Line Railroad bridge and 1½ miles downstream from Caw Caw Swamp.

Drainage area.--683 sq mi.

Records available.--October 1938 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 149.02 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers). Prior to Feb. 23, 1939, wire-weight gage at same site and datum.

Average discharge.--22 years (1938-60), 715 cfs.

Extremes.--1938-60: Maximum discharge, 9,500 cfs Sept. 18, 1945 (gage height, 14.28 ft), from rating curve extended above 4,200 cfs by velocity-area studies and logarithmic plotting; minimum, 190 cfs Sept. 13, 14, 1954.

Maximum flood known since at least 1893, 14.7 ft in September 1928, on basis of information from Department of Public Utilities, city of Orangeburg (discharge, 10,000 cfs, from rating curve extended as described above).

Remarks.--About 2.5 cfs diverted above station by city of Orangeburg for municipal supply since 1941. Records of chemical analyses and water temperatures for the period October 1958 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	577	580	717	724	697	833	941	437	484	444	516	415	613
1952	403	578	660	613	898	1,474	1,028	657	569	351	620	650	707
1953	441	519	624	830	971	1,122	699	706	358	405	374	513	629
1954	527	417	877	749	588	647	769	492	305	240	239	221	505
1955	264	333	442	597	619	524	679	424	393	335	365	336	441
1956	361	367	391	396	727	782	709	449	239	253	263	318	437
1957	536	366	455	503	512	657	611	555	669	317	284	309	482
1958	395	582	909	841	973	1,038	1,519	1,092	545	528	433	402	770
1959	388	387	509	659	984	1,158	913	849	686	1,072	742	807	762
1960	2,191	1,467	1,295	1,356	2,249	1,602	1,880	904	781	773	804	674	1,328

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.97	0.95	1.21	1.22	1.06	1.41	1.54	0.74	0.79	0.75	0.87	0.68	12.19
1952	.68	.94	1.11	1.04	1.41	2.49	1.68	1.11	.93	.69	1.05	1.06	14.09
1953	.74	.85	1.05	1.41	1.48	1.89	1.14	1.19	.58	.68	.63	.84	12.48
1954	.89	.68	1.48	1.27	.90	1.09	1.26	.81	.50	.40	.40	.36	10.04
1955	.45	.54	.75	1.01	.94	.88	1.11	.72	.64	.56	.62	.55	8.77
1956	.61	.60	.66	.67	1.14	1.31	1.16	.76	.39	.43	.44	.52	8.69
1957	.90	.63	.77	.85	.78	1.11	1.00	.94	1.09	.53	.46	.50	9.58
1958	.87	.95	1.53	1.42	1.48	1.75	2.48	1.84	.89	.89	.73	.86	15.29
1959	.65	.63	.86	1.11	1.50	1.96	1.50	1.43	1.12	1.81	1.26	1.32	15.15
1960	3.70	2.40	2.19	2.29	3.55	2.71	3.07	1.52	1.27	1.30	1.36	1.10	26.46

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	658	15.07
1951	1203	1,370	Apr. 10, 1951	299	613	0.898	12.19	593	11.79
1952	1233	2,410	May 25, 1952	285	707	1.04	14.09	703	14.00
1953	1273	2,160	Sept. 23, 1953	271	629	.921	12.48	649	12.69
1954	1333	2,420	Apr. 10, 1954	190	505	.739	10.04	439	8.73
1955	1383	1,420	Apr. 20, 1955	209	441	.646	8.77	448	8.90
1956	1433	1,160	Feb. 8, 1956	208	437	.640	8.69	458	9.12
1957	1503	1,250	June 17, 1957	208	482	.706	9.58	525	10.43
1958	1553	3,340	Mar. 1, 1958	316	770	1.13	15.29	719	14.28
1959	1623	2,570	May 14, 1959	327	762	1.12	15.15	1,070	21.30
1960	1703	4,240	Apr. 6, 1960	545	1,328	1.94	26.46	-	-

a Maximum peak discharge; maximum discharge during year, 1,550 cfs at 12:01 a.m. Oct. 1, stage falling.

1740. Edisto River near Branchville, S. C.

Location.--Lat 33°10'35", long 80°48'05", on right bank 400 ft downstream from bridge on U.S. Highway 21, 4.7 miles downstream from Brier Branch, and 5.2 miles south of Branchville, Orangeburg County.

Drainage area.--1,720 sq mi, approximately.

Records available.--October 1945 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 80.02 ft above mean sea level (levels by Corps of Engineers). Prior to May 19, 1949, at datum 1.00 ft higher.

Average discharge.--15 years (1945-60), 1,802 cfs.

Extremes.--1945-60: Maximum discharge, 12,600 cfs Apr. 8, 1960 (gage height, 10.93 ft); minimum, 323 cfs Aug. 14, 1956.

Maximum flood known since at least 1893, 13.5 ft, present datum, in September 1928, on basis of information from State Highway Department (discharge, 25,700 cfs, by conveyance-slope study).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,130	1,153	1,487	1,699	1,607	1,950	2,507	947	919	839	979	741	1,328
1952	791	1,161	1,330	1,361	2,177	3,631	2,428	1,489	1,242	703	1,093	1,254	1,552
1953	894	994	1,255	1,943	2,368	3,504	1,585	1,734	805	866	744	775	1,453
1954	1,440	918	2,155	2,120	1,516	1,598	1,784	1,197	733	499	487	453	1,242
1955	481	640	922	1,232	1,500	1,192	1,726	849	966	826	692	794	980
1956	742	761	1,028	945	1,998	2,304	1,842	1,288	476	475	445	493	1,063
1957	1,048	768	902	1,187	1,220	1,568	1,568	1,322	1,172	647	527	602	1,043
1958	874	1,044	2,286	2,066	2,532	5,164	4,911	2,964	1,128	1,187	808	784	1,975
1959	751	767	1,011	1,502	2,525	3,273	2,828	2,065	1,861	1,891	1,604	1,620	1,803
1960	6,418	4,515	3,678	3,698	7,123	4,927	5,712	2,258	1,560	1,500	1,777	1,371	3,687

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.76	0.75	1.00	1.14	0.97	1.30	1.63	0.64	0.60	0.56	0.66	0.48	10.49
1952	.53	.75	.89	.91	1.37	2.43	1.57	1.00	.81	.47	.73	.81	12.27
1953	.60	.64	.84	1.30	1.44	2.35	1.03	1.16	.52	.58	.50	.50	11.46
1954	.96	.60	1.44	1.42	.92	1.07	1.16	.80	.48	.33	.33	.29	9.80
1955	.32	.42	.62	.83	.91	.80	1.12	.57	.63	.55	.46	.52	7.75
1956	.50	.49	.69	.63	1.25	1.54	1.19	.86	.31	.32	.30	.32	8.40
1957	.70	.50	.60	.80	.74	1.05	1.02	.89	.76	.43	.35	.39	8.23
1958	.59	.68	1.53	1.38	1.53	2.12	3.19	1.98	.73	.80	.54	.51	15.58
1959	.50	.50	.68	1.01	1.53	2.19	1.83	1.38	1.20	1.27	1.08	1.05	14.22
1960	4.30	2.92	2.47	2.48	4.46	3.30	3.70	1.51	1.01	1.01	1.19	.89	29.24

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,368	10.79
1951	1203	3,640	Apr. 3, 1951	596	1,328	0.772	10.49	1,286	10.15
1952	1233	5,350	Mar. 28 or 29	557	1,552	.902	12.27	1,540	12.18
1953	1273	4,950	Mar. 3, 1953	614	1,453	.845	11.46	1,569	12.38
1954	1333	3,030	Oct. 3, 1953	380	1,242	.722	9.80	1,033	8.16
1955	1383	2,690	Apr. 24, 1955	439	980	.570	7.75	1,021	8.07
1956	1433	3,030	Feb. 11, 12, 1956	334	1,063	.618	8.40	1,079	8.52
1957	1503	2,200	(a)	402	1,043	.606	8.23	1,169	9.23
1958	1553	8,050	Apr. 19, 20, 1958	657	1,975	1.15	15.58	1,833	14.46
1959	1623	5,150	Mar. 9, 1959	671	1,803	1.05	14.22	2,818	22.23
1960	1703	12,600	Apr. 8, 1960	1,100	3,697	2.15	29.24	-	-

a Mar. 30 to Apr. 1, 1957.

1750. Edisto River near Givhans, S. C.

Location.--Lat 33°01'40", long 80°23'30", on left bank at downstream side of bridge on State Highway 61, 2.3 miles downstream from Four Hole Swamp and 2.8 miles west of Givhans, Dorchester County.

Drainage area.--2,730 sq mi, approximately.

Records available.--January 1939 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 20.46 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--21 years (1939-60), 2,444 cfs.

Extremes.--1939-60: Maximum discharge, 24,300 cfs Sept. 21, 1945 (gage height, 17.28 ft), from rating curve extended above 15,000 cfs by logarithmic plotting; minimum, 290 cfs Aug. 16, 1956 (gage height, 0.51 ft).
Maximum stage known since at least 1904, 17.5 ft in February 1925, from investigation by Charleston Commissioners of Public Works (discharge, 24,900 cfs).

Remarks.--City of Charleston diverts water above station for municipal supply.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,215	1,264	1,830	2,850	2,183	2,442	3,552	1,100	904	934	1,410	938	1,715
1952	817	1,304	1,515	1,697	3,552	4,972	3,911	1,913	1,510	719	1,220	2,045	2,089
1953	1,388	1,157	1,820	2,538	3,476	6,764	2,202	1,801	739	820	780	717	1,997
1954	1,411	840	2,420	2,946	2,040	1,876	2,247	1,634	679	443	422	385	1,445
1955	415	544	812	1,143	1,569	1,171	2,218	963	977	886	1,108	2,570	1,191
1956	1,178	728	1,638	1,096	3,717	3,690	2,504	2,094	435	428	403	469	1,525
1957	1,144	787	865	1,292	1,330	2,039	2,032	2,290	1,748	653	450	513	1,266
1958	794	853	2,862	3,183	3,745	4,831	8,957	4,350	1,243	1,349	859	745	2,805
1959	639	648	895	1,687	4,494	7,346	4,115	2,585	2,732	2,705	2,762	2,415	2,724
1960	10,140	7,657	4,880	4,959	10,650	7,743	7,412	2,267	1,486	1,968	2,357	1,534	5,225

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,538	-
1951	1203	4,790	Apr. 8, 9, 1951	625	1,715	-	-	1,658	-
1952	1233	7,950	Apr. 2, 1952	565	2,089	-	-	2,134	-
1953	1273	10,400	Mar. 7, 1953	574	1,997	-	-	2,041	-
1954	1335	3,610	(a)	310	1,445	-	-	1,199	-
1955	1383	4,540	Sept. 16, 1955	378	1,191	-	-	1,541	-
1956	1433	5,440	Feb. 13-15, 1956	292	1,525	-	-	1,462	-
1957	1503	3,610	May 21, 1957	352	1,266	-	-	1,412	-
1958	1553	12,000	Apr. 22, 23, 1958	578	2,805	-	-	2,608	-
1959	1623	14,100	Mar. 9, 1959	578	2,724	-	-	4,445	-
1960	1703	14,600	Apr. 11, 1960	1,080	5,225	-	-	-	-

a Dec. 27-29, 1953; Jan. 6, 7, 1954.

1755. Salkehatchie River near Miley, S. C.

Location.--Lat 32°59'20", long 81°03'10", on right bank 84 ft downstream from bridge on U.S. Highway 601, 2.6 miles downstream from Savannah Creek, 3.1 miles upstream from Hampton & Branchville Railroad bridge, and 3.1 miles northwest of Miley, Hampton County.

Drainage area.--341 sq mi.

Records available.--February 1951 to September 1960.

Gage.--Staff gage. Datum of gage is 64.35 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Dec. 6, 1957, at bridge 84 ft upstream at same datum.

Average discharge.--9 years (1951-60), 286 cfs.

Extremes.--1951-60: Maximum discharge, 1,880 cfs Apr. 6, 1960 (gage height, 4.94 ft), from rating curve extended above 1,500 cfs by logarithmic plotting; minimum, 17 cfs Sept. 13, 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	268	346	335	110	132	135	155	132	-
1952	106	254	279	225	422	550	585	272	176	118	147	191	258
1953	123	189	245	360	428	632	224	212	117	181	128	131	247
1954	246	176	524	387	255	321	272	285	96.6	74.1	48.6	44.1	228
1955	68.2	136	200	281	312	214	359	92.0	163	126	100	215	186
1956	115	147	206	188	380	351	255	277	120	102	60.8	166	201
1957	239	159	229	221	196	348	241	361	204	107	77.8	121	216
1958	277	316	416	391	404	550	718	517	124	179	95.8	75.7	321
1959	97.7	130	243	313	507	813	440	179	137	229	152	219	287
1960	1038	751	703	679	1,305	988	918	508	219	212	234	230	628

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	1.16	1.28	0.37	0.43	0.46	0.52	0.43	-
1952	0.36	0.83	0.94	0.76	1.34	1.79	1.25	.92	.58	.40	.50	.62	10.29
1953	.42	.62	.82	1.22	1.31	2.13	.73	.72	.38	.61	.43	.43	9.82
1954	.83	.58	1.78	1.30	.78	1.08	.89	.96	.32	.25	.16	.14	9.07
1955	.23	.45	.68	.95	.95	.72	1.11	.31	.53	.43	.34	.70	7.40
1956	.39	.48	.88	.64	1.20	1.19	.85	.94	.39	.34	.21	.54	8.03
1957	.81	.52	.77	.75	1.60	1.18	.79	1.22	.93	.36	.26	.40	8.59
1958	.94	1.03	1.41	1.33	1.23	1.86	2.35	1.07	.41	.61	.32	.24	12.80
1959	.33	.43	.82	1.06	1.55	2.74	1.44	.61	.45	.77	.51	.72	11.43
1960	3.50	2.39	2.38	2.29	4.12	3.34	3.00	1.04	.72	.72	.79	.75	25.04

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1233	-	-	-	-	-	-	-	-
1952	1233	905	Mar. 28, 29	44	258	0.757	10.29	251	10.02
1953	1273	950	Sept. 30, 1953	43	247	.724	9.82	280	11.15
1954	1333	a860	May 15, 1954	18	228	.669	9.07	182	7.24
1955	1383	950	Apr. 15, 1955	38	186	.545	7.40	196	7.79
1956	1433	774	May 6, 1956	38	201	.589	8.03	210	8.38
1957	1503	732	Mar. 26, 1957	38	216	.633	8.59	248	9.87
1958	1553	1,140	Apr. 17, 1958	45	321	.941	12.80	276	11.00
1959	1623	1,600	Mar. 7, 1959	54	287	.842	11.43	456	18.12
1960	1703	1,880	Apr. 6, 1960	109	628	1.84	25.04	-	-

a Maximum peak discharge; maximum discharge during year, 941 cfs at 12:01 a.m. Oct. 1, 1955, stage falling.

1760. Combahee River near Yemassee, S. C.

Location.--Lat 32°42'25", long 80°49'35", near left bank on downstream side of pile bent of bridge on U.S. Highway 17A, 0.2 mile upstream from Atlantic Coast Line Railroad bridge, 1.8 miles northeast of Yemassee, Hampton County, and 5 miles downstream from Black Creek.

Drainage area.--1,100 sq mi, approximately.

Records available.--June 1951 to June 1957, water years 1957-60 (annual maximum).

Gage.--Crest-stage gage. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. June 1, 1951, to June 30, 1957, water-stage recorder at same site and datum with auxiliary water-stage recorder 10.2 miles downstream from base gage.

Average discharge.--5 years (1951-56), 483 cfs.

Extremes.--1952-60: Maximum discharge, 11,400 cfs Nov. 2, 1959 (gage height, 10.80 ft).
1951-57: Minimum daily discharge, 9 cfs July 7, 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	109	186	405	136	-
1952	83.1	593	453	437	1,597	1,524	1,106	511	334	117	135	304	579
1953	283	226	379	587	1,010	2,563	665	359	111	169	173	123	553
1954	308	161	764	838	502	524	785	1,028	140	66.4	43.7	37.8	434
1955	44.3	73.6	202	323	530	261	1,228	143	205	374	185	683	351
1956	228	159	595	383	1,604	1,168	726	827	101	70.1	59.7	121	500
1957	318	244	243	344	344	586	644	780	1,072	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	0.11	0.19	0.42	0.14	-
1952	0.10	0.40	0.48	0.46	1.56	1.60	1.13	0.54	.34	.12	.14	.31	7.18
1953	.30	.23	.40	.62	.96	2.69	.68	.38	.11	.18	.18	.12	6.85
1954	.32	.16	.80	.68	.47	.55	.80	1.08	.14	.07	.05	.04	5.36
1955	.05	.07	.21	.34	.50	.27	1.25	.15	.21	.39	.19	.69	4.32
1956	.24	.16	.62	.40	1.58	1.22	.74	.87	.10	.07	.06	.12	6.18
1957	.33	.25	.25	.36	.33	.61	.65	.82	1.09	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1233	-	-	-	-	-	-	-	-
1952	1253	3,530	Feb. 19, 1952	37	579	0.526	7.18	575	7.13
1953	1273	3,110	Mar. 7, 6, 1953	37	553	.503	6.85	583	7.20
1954	1333	3,530	May 18, 1954	9	434	.395	5.36	357	4.41
1955	1383	5,330	Apr. 18, 1955	11	351	.319	4.32	407	5.01
1956	1433	4,680	Feb. 10, 1956	14	500	.455	6.18	485	5.99
1957	1503	2,150	June 6, 1957	-	-	-	-	-	-
1958	1553	7,930	Apr. 19, 1958	-	-	-	-	-	-
1959	1623	9,850	Mar. 7, 1959	-	-	-	-	-	-
1960	1703	11,400	Nov. 2, 1959	-	-	-	-	-	-

1765. Coosawhatchie River near Hampton, S. C.

Location.--Lat 32°50'10", long 81°07'55", near left bank on downstream side of bridge on U.S. Highway 601, 1.6 miles downstream from Black Creek and 2.5 miles southwest of Hampton, Hampton County.

Drainage area.--203 sq mi.

Records available.--February 1951 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 50.30 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 26, 1954, wire-weight gage at same site and datum.

Average discharge.--9 years (1951-60), 154 cfs.

Extremes.--1951-60: Maximum discharge, 2,950 cfs Mar. 6, 1959 (gage height, 5.87 ft), from rating curve extended above 1,800 cfs by velocity-area studies; no flow Aug. 31, Sept. 1, 1951, for many days during summer and fall months of 1954, Aug. 12-30, 1956, Sept. 5, 6, 1957.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	126	195	300	13.3	27.0	40.0	17.1	22.8	-
1952	5.51	60.7	92.8	91.5	438	429	239	164	105	12.5	28.6	86.8	145
1953	49.5	50.6	80.4	160	302	763	231	132	18.9	16.6	33.7	106	161
1954	97.8	34.0	262	247	118	137	122	398	49.6	.06	.03	0	123
1955	0	.67	16.1	44.5	71.9	32.9	216	43.2	118	121	56.7	236	79.1
1956	68.7	38.5	127	78.5	308	268	203	183	24.4	9.31	1.88	16.1	110
1957	13.5	5.86	20.1	20.7	29.1	80.4	56.3	143	212	115	26.2	17.5	61.7
1958	89.9	85.6	220	240	211	415	556	132	32.2	155	9.38	20.27	179
1959	8.10	5.28	26.6	73.7	433	684	244	136	92.4	136	62.9	95.1	165
1960	530	388	413	443	1,047	696	532	59.5	65.8	100	34.9	30.3	359

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	0.37	1.10	1.65	0.08	0.15	0.23	0.10	0.12	-
1952	0.02	0.33	0.53	0.52	2.33	2.43	1.32	.93	.58	.07	.16	.48	9.70
1953	.28	.28	.46	.91	1.55	4.34	1.27	.75	.10	.09	.19	.58	10.80
1954	.56	.19	1.49	1.41	.60	.78	.67	2.26	.27	.0003	.0002	0	8.23
1955	0	.003	.09	.25	.37	.19	1.18	.25	.65	.69	.32	1.29	5.28
1956	.39	.21	.72	.45	1.64	1.52	1.12	1.04	.13	.05	.01	.09	7.37
1957	.08	.03	.11	.12	.15	.46	.31	.81	1.16	.65	.15	.10	4.13
1958	.51	.47	1.24	1.36	1.08	2.35	3.06	.75	.18	.88	.05	.01	11.94
1959	.05	.03	.15	.42	2.22	3.88	1.34	.77	.51	.77	.36	.53	11.03
1960	3.01	2.13	2.34	2.51	5.56	5.95	2.92	.34	.36	.57	.20	.17	24.06

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1233	-	-	0	-	-	-	-	-
1952	1233	1,780	Feb. 16, 1952	.1	145	0.714	9.70	147	9.84
1953	1273	2,750	Mar. 24, 1953	.1	161	.793	10.80	180	12.02
1954	1333	2,360	May 16, 1954	0	123	.606	8.23	91.1	6.08
1955	1383	1,430	Apr. 15, 1955	0	79.1	.390	5.28	97.5	6.51
1956	1433	1,390	Feb. 7, 1956	0	110	.542	7.37	93.5	6.27
1957	1503	649	May 31, 1957	0	61.7	.304	4.13	91.8	6.13
1958	1553	1,400	Apr. 16, 1958	.1	179	.882	11.94	149	9.95
1959	1623	2,950	Mar. 6, 1959	.2	165	.813	11.03	273	18.28
1960	1703	2,150	Jan. 31, 1960	1.0	359	1.77	24.06	-	-

1770. Chattooga River near Clayton, Ga.

Location.--Lat 34°49', long 83°18', on left bank 150 ft downstream from new bridge on U.S. Highway 76, $2\frac{1}{2}$ miles upstream from Stekoa Creek, 7 miles southeast of Clayton, Rabun County, 9 miles downstream from War Woman Creek, and 9 miles upstream from confluence with Tallulah River.

Drainage area.--207 sq mi.

Records available.--May 1907 to June 1908, October 1939 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 1,165.6 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by State Highway Department of Georgia). May 1907 to June 1908 staff gage at site 400 ft upstream at different datum.

Average discharge.--21 years (1939-60), 597 cfs.

Extremes.--1907-8, 1939-60: Maximum discharge, 29,000 cfs Aug. 30, 1940 (gage height, 13.8 ft), from rating curve extended above 4,700 cfs on basis of slope-area measurements at gage heights 9.9 and 13.8 ft; minimum, 88 cfs Oct. 8, 12, 13, 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	544	391	628	462	611	773	850	639	532	344	234	204	517
1952	186	366	660	662	814	1,671	1,046	699	447	266	327	229	631
1953	164	276	372	784	1,109	1,029	655	662	439	472	319	253	541
1954	192	230	705	1,120	709	753	790	547	419	246	199	118	502
1955	98.6	155	369	305	703	553	833	910	534	532	426	233	470
1956	214	193	183	155	806	619	877	502	326	355	192	174	380
1957	207	237	496	557	1,075	791	1,182	550	677	428	256	327	561
1958	534	930	931	810	836	819	1,089	1,090	532	834	467	281	763
1959	244	212	245	475	499	550	795	942	947	581	359	554	533
1960	1,047	639	688	808	1,265	1,030	1,121	621	494	428	554	449	760

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3.03	2.11	3.49	2.57	3.07	4.30	4.59	3.56	2.87	1.91	1.30	1.10	33.90
1952	1.04	1.98	4.78	3.69	4.24	9.30	5.63	3.90	2.41	1.49	1.82	1.24	41.52
1953	.91	1.48	2.08	4.37	5.58	5.73	3.53	3.69	2.36	2.63	1.78	1.36	35.50
1954	1.07	1.24	3.93	6.24	3.57	4.20	4.28	3.04	2.25	1.37	1.11	.64	32.92
1955	.55	.84	2.05	1.70	3.54	3.08	4.48	5.07	2.88	2.96	2.38	1.26	30.79
1956	1.19	1.04	1.02	.86	4.20	3.45	4.73	2.80	1.75	1.97	1.07	.94	25.02
1957	1.15	1.27	2.78	3.10	5.40	4.40	6.37	3.07	3.65	2.38	1.43	1.76	36.76
1958	2.97	5.01	5.19	4.51	4.21	4.56	5.87	6.08	2.87	4.65	2.61	1.52	50.05
1959	1.36	1.14	1.36	2.64	2.51	3.07	4.28	5.25	5.10	3.24	1.99	2.99	34.93
1960	5.83	3.45	3.83	4.50	6.59	5.74	6.05	3.46	2.67	2.39	3.09	2.42	50.02

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	626	41.07
1951	1203	5,220	Dec. 7, 1950	145	517	2.50	33.90	504	33.07
1952	1233	13,400	Mar. 11, 1952	130	631	3.05	41.52	581	38.19
1953	1273	6,020	Feb. 21, 1953	136	541	2.61	35.50	568	37.27
1954	1333	6,230	Jan. 22, 1954	92	502	2.43	32.92	459	30.12
1955	1383	5,820	Feb. 6, 1955	88	470	2.27	30.79	467	30.60
1956	1433	5,820	Apr. 16, 1956	110	380	1.84	25.02	410	26.97
1957	1503	5,820	Apr. 5, 1957	120	561	2.71	36.76	682	44.73
1958	1553	5,620	Nov. 19, 1957	230	763	3.69	50.05	621	40.74
1959	1623	5,620	May 31, 1959	178	533	2.57	34.93	674	44.18
1960	1703	6,440	Oct. 9, 1959	285	760	3.67	50.02	-	-

SAVANNAH RIVER BASIN

1785. Burton Reservoir near Clayton, Ga.

Location.--Lat 34°48', long 83°32', on Tallulah River, 5.5 miles downstream from bridge on U.S. Highway 76, 10 miles southwest of Clayton, Rabun County.

Drainage area.--115 sq mi.

Records available.--October 1929 to September 1960.

Gage.--Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Georgia Power Co.).

Remarks.--Reservoir is formed by concrete gravity dam. Dam completed in 1920. Spillway (crest elevation, 1,860.0 ft) is equipped with eight gates 22 ft wide by 6.6 ft high. Total capacity at elevation 1,866.6 ft (top of gates) is 108,000 acre-ft, of which 106,000 acre-ft is usable storage. Figures given herein represent total contents. Reservoir is used for power development.

Cooperation.--Records for 1951-60 not previously published, furnished by Georgia Power Co.

Contents, in acre-feet, on last day of month												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	70,500	49,800	44,800	43,500	49,600	79,000	103,000	99,200	98,900	97,000	77,100	74,300
1952	72,700	70,500	81,600	81,600	78,800	108,000	106,000	94,200	81,600	76,500	69,400	
1953	56,900	54,600	41,700	61,700	84,300	91,000	95,500	98,100	91,000	94,900	86,200	78,800
1954	66,600	59,400	54,800	76,300	85,000	90,000	100,000	105,000	95,700	91,800	85,200	67,200
1955	61,500	60,200	50,300	48,800	68,400	86,000	93,600	103,000	105,000	101,000	86,200	75,400
1956	62,400	41,600	31,500	26,300	56,200	81,600	105,000	102,000	102,000	93,100	81,900	
1957	70,100	55,900	63,600	69,400	77,100	87,700	105,000	106,000	105,000	97,000	82,400	85,200
1958	76,700	82,600	74,700	82,800	92,100	94,400	104,000	103,000	103,000	101,000	96,000	82,400
1959	70,500	61,300	46,400	58,100	73,200	89,200	104,000	105,000	101,000	99,500	101,000	92,100
1960	68,400	72,500	61,100	62,800	81,400	94,400	99,200	103,000	102,000	101,000	96,200	88,200

1795. Mathis Reservoir near Lakemont, Ga.

Location.--Lat 34°46', long 83°25', on Tallulah River, 1 mile upstream from bridge on U.S. Highway 23, 1½ miles south of Lakemont, Rabun County.

Drainage area.--151 sq mi.

Records available.--October 1929 to September 1960.

Gage.--Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Georgia Power Co.).

Remarks.--Reservoir is formed by concrete slab and buttress dam. Spillway (crest elevation, 1,682.75 ft) is equipped with 16 gates 15.8 ft wide by 6.85 ft high. Dam completed in 1914. Total capacity at elevation 1,689.6 ft (top of gates) is 31,200 acre-ft, of which 23,000 acre-ft is usable storage. Figures given herein represent total contents. Reservoir is used for power development.

Cooperation.--Records for 1951-60 not previously published, furnished by Georgia Power Co.

Contents, in acre-feet, on last day of month												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	30,000	27,900	29,200	27,000	28,600	28,100	29,800	29,000	29,800	29,600	29,000	28,700
1952	29,100	28,400	28,100	28,500	29,100	29,500	28,600	28,800	29,800	30,100	29,400	29,200
1953	29,300	29,400	28,900	28,200	28,200	28,100	29,000	29,600	29,600	29,800	29,600	30,200
1954	29,400	28,700	28,700	29,200	28,500	29,000	29,700	29,400	29,500	30,100	29,800	28,800
1955	29,400	28,400	29,200	28,500	28,500	29,200	29,400	28,600	29,500	29,400	29,300	29,000
1956	28,900	29,200	29,400	29,400	29,600	29,500	29,400	29,500	29,700	29,900	29,800	29,400
1957	26,200	29,200	29,200	29,800	29,800	29,900	29,200	29,600	29,900	29,600	30,100	29,700
1958	29,200	26,700	30,100	26,700	27,200	29,200	29,300	29,800	29,400	30,300	29,800	29,200
1959	24,900	26,200	29,600	29,800	28,500	29,400	29,600	30,700	29,000	30,100	29,500	28,800
1960	27,900	26,400	29,900	29,800	28,300	29,400	30,100	29,200	28,000	29,900	29,400	29,400

1820. Panther Creek near Toccoa, Ga.

Location.--Lat 34°41', long 83°21', on left bank at Yonah Dam settlement, a quarter of a mile upstream from mouth and 7 miles north of Toccoa, Stephens County.

Drainage area.--32.5 sq mi.

Records available.--October 1942 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 673.53 ft above mean sea level, datum of 1929 (levels by Georgia Power Co.).

Average discharge.--18 years (1942-60), 68.5 cfs, revised (adjusted for diversion).

Extremes.--1942-60: Maximum discharge, 15,100 cfs June 16, 1949 (gage height, 18.0 ft, from floodmark), from rating curve extended above 800 cfs on basis of slope-area measurement of peak flow; minimum, 10 cfs Sept. 30, 1954, Sept. 23, 24, 1955.
Maximum stage known since at least 1927, that of June 16, 1949, from records furnished by Georgia Power Co.

Remarks.--Diversion at point 2.0 miles above station for water supply by city of Toccoa.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	55.3	43.6	53.8	46.2	48.3	75.0	78.7	60.7	59.6	47.7	30.2	28.9	52.4
1952	31.0	35.8	87.0	65.5	97.0	225	123	84.7	81.0	44.7	42.5	28.1	77.1
1953	25.1	29.5	36.1	71.4	102	95.7	72.4	82.1	59.8	95.6	47.1	39.0	62.7
1954	31.8	33.9	81.0	143	79.1	91.5	104	71.7	56.4	37.4	25.8	16.1	64.3
1955	15.3	22.4	34.9	35.4	77.8	42.9	59.8	43.7	32.0	33.8	28.7	15.7	36.6
1956	17.8	21.6	19.5	18.5	73.4	67.2	99.0	63.9	36.9	34.3	21.7	27.2	41.5
1957	23.5	25.6	39.4	55.9	82.6	66.3	116	62.6	44.3	30.7	25.8	29.9	49.9
1958	46.3	75.2	77.3	71.7	94.0	107	118	95.9	65.2	81.8	57.4	37.7	77.2
1959	35.2	28.0	31.6	45.3	52.8	58.2	86.3	73.4	63.4	45.1	28.4	46.4	49.1
1960	79.3	59.0	62.9	90.5	135	129	127	84.2	62.3	44.8	42.8	45.3	79.8

Monthly and yearly runoff, in inches (adjusted) ^a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.96	1.50	1.91	1.64	1.55	2.66	2.70	2.16	2.04	1.70	1.07	0.99	21.88
1952	1.10	1.23	3.09	2.33	3.21	7.98	4.22	3.01	2.10	1.59	1.50	.97	32.33
1953	.89	1.01	1.28	2.54	3.27	3.39	2.49	2.92	2.02	3.59	1.67	1.34	26.21
1954	1.13	1.16	2.87	5.07	2.53	3.25	3.57	2.55	1.94	1.33	.93	.59	26.92
1955	.63	.80	1.34	1.26	2.49	1.52	2.05	1.57	1.16	1.22	1.03	.68	15.75
1956	.74	.81	.78	.73	2.44	2.39	3.40	2.27	1.34	1.23	.88	1.06	18.07
1957	.88	.93	1.46	1.98	2.64	2.35	3.98	2.22	1.55	1.16	.97	1.07	21.19
1958	1.66	2.61	2.74	2.55	3.01	3.79	4.05	3.40	2.24	2.90	2.04	1.34	32.33
1959	1.22	1.04	1.16	1.53	1.72	2.06	2.97	2.61	2.22	1.63	1.06	1.62	20.84
1960	2.80	1.99	2.24	3.20	4.48	4.58	4.36	2.99	2.14	1.61	1.52	1.60	33.51

^a Adjusted for diversion by city of Toccoa beginning August 1954. Adjusted figures given herein August 1954 to September 1955 supersede unadjusted figures previously published in water-supply papers.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted ^a /			Observed	Adjusted ^a /	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	64.5	-	26.95
1951	1203	810	Oct. 20, 1950	19	52.4	-	1.61	21.88	52.5	-	21.93
1952	1233	3,500	Mar. 11, 1952	22	77.1	-	2.37	32.33	71.8	-	30.09
1953	1273	3,740	July 22, 1953	22	62.7	-	1.93	26.21	67.5	-	28.19
1954	1333	2,570	Jan. 22, 1954	12	64.3	64.4	1.98	26.92	58.0	58.7	24.53
1955	1383	2,010	Feb. 6, 1955	10	36.6	37.7	1.16	15.75	35.4	36.5	15.31
1956	1433	1,150	Apr. 15, 1956	14	41.5	43.1	1.33	18.07	44.0	45.3	19.01
1957	1503	810	Apr. 4, 1957	15	49.9	50.8	1.56	21.19	59.1	59.7	24.93
1958	1553	592	Nov. 19, 1957	23	77.2	77.4	2.38	32.33	77.2	77.4	32.33
1959	1623	1,530	May 31, 1959	20	49.1	49.9	1.54	20.84	58.0	58.5	24.45
1960	1703	1,000	Feb. 5, 1960	21	79.8	80.0	2.46	33.51	-	-	-

^a Adjusted for diversion by city of Toccoa beginning August 1954. Adjusted figures given herein August 1954 to September 1955 supersede unadjusted figures previously published in water-supply papers.

1840. Tugaloo River near Hartwell, Ga.

Location.--Lat 34°29', long 82°55', on right bank three-quarters of a mile upstream from Beaverdam Creek, 5 miles upstream from confluence with Seneca River, and 10 miles north of Hartwell, Hart County.

Drainage area.--909 sq mi.

Records available.--April 1925 to September 1927, February 1940 to December 1960 (discontinued). Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Altitude of gage is 570 ft (by barometer). April 1925 to September 1927 at datum about 1 ft higher.

Average discharge.--22 years (1925-27, 1940-60), 1,947 cfs (unadjusted).

Extremes.--1925-27, 1940-60: Maximum discharge, 28,600 cfs Aug. 31, 1940 (gage height, 10.8 ft); minimum daily, 188 cfs Oct. 18, 1954.

Remarks.--Flow regulated by powerplants above station and by Burton and Mathis Reservoirs on Tallulah River.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,189	1,618	2,018	1,411	1,548	2,134	2,308	2,058	1,996	1,223	1,146	856	1,710
1952	773	1,246	3,041	2,109	2,754	6,203	3,422	2,307	1,748	1,272	1,435	860	2,266
1953	863	956	1,499	2,335	3,367	2,873	1,934	2,446	1,465	1,563	1,073	1,074	1,779
1954	1,009	972	2,772	3,442	2,126	2,749	2,569	1,701	1,565	860	697	656	1,760
1955	420	610	1,374	1,192	2,208	1,396	1,841	2,045	1,269	1,538	1,257	869	1,330
1956	799	965	834	655	2,196	1,850	2,713	1,688	992	1,050	716	936	1,276
1957	967	988	1,368	1,619	2,982	2,207	3,484	1,682	1,664	1,144	989	924	1,673
1958	1,858	2,974	2,690	2,550	2,717	2,802	3,437	3,289	1,640	2,675	1,664	1,215	2,442
1959	1,241	961	1,132	1,447	1,610	1,689	2,411	2,480	2,743	1,613	909	1,840	1,665
1960	2,755	2,124	2,219	2,708	3,916	3,417	3,663	2,034	1,857	1,380	1,893	1,655	2,462
1961	2,038	1,403	1,512	-	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches (adjusted)^a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.38	1.52	2.48	1.72	1.94	3.30	3.36	2.51	2.47	1.51	1.03	0.99	25.21
1952	.96	1.47	4.08	2.68	3.22	8.47	4.14	2.93	1.92	1.36	1.71	.90	33.84
1953	.84	1.13	1.63	3.36	4.32	3.78	2.49	3.17	1.65	2.06	1.18	1.18	26.79
1954	1.01	1.03	3.42	4.82	2.60	3.60	3.37	2.06	1.73	1.02	.74	.41	25.81
1955	.43	.70	1.56	1.46	2.94	2.14	2.42	2.77	1.62	1.87	1.29	.84	20.04
1956	.74	.76	.85	.72	3.22	2.87	3.82	2.09	1.22	1.34	.72	.91	19.26
1957	.92	.98	1.89	2.44	3.57	3.02	4.62	2.17	2.03	1.43	.96	1.18	25.21
1958	2.17	3.72	3.32	3.08	3.31	3.64	4.42	4.16	2.01	3.37	1.99	1.19	36.38
1959	1.24	1.06	1.23	2.05	2.14	2.49	3.27	3.19	3.25	2.04	1.18	2.19	25.33
1960	3.40	2.29	2.61	3.47	4.99	4.62	4.61	2.64	2.23	1.76	2.29	1.86	36.77
1961	2.27	1.47	1.70	-	-	-	-	-	-	-	-	-	-

^a Adjusted for change in contents in Burton and Mathis Reservoirs.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted ^a /					Observed		Adjusted ^a /
		Momentary		maximum		Minimum	Mean	Mean	Per square mile	Runoff in inches		Mean	Mean	Runoff in inches
		Discharge	Date		day									
1950	-	-	-	-	-	-	-	-	-	-	-	2,145	2,104	31.40
1951	1203	15,300	Oct. 20,	1950	305	1,710	1,687	1,686	1.86	25.21	1,646	1,695	25.34	
1952	1233	25,100	Mar. 11,	1952	308	2,266	2,260	2,260	2.50	33.84	2,119	2,111	30.93	
1953	1273	15,300	Feb. 21,	1953	318	1,779	1,793	1,798	1.98	26.79	1,901	1,919	28.65	
1954	1333	19,200	Jan. 18,	1954	197	1,760	1,742	1,742	1.92	25.81	1,562	1,556	23.04	
1955	1393	18,200	Feb. 7,	1955	188	1,330	1,342	1,342	1.48	20.04	1,345	1,319	19.70	
1956	1433	12,800	Apr. 16,	1956	236	1,276	1,286	1,286	1.41	19.26	1,338	1,382	20.70	
1957	1503	16,700	Apr. 5,	1957	248	1,673	1,678	1,678	1.85	25.21	2,025	2,042	30.63	
1958	1553	10,300	Nov. 19,	1957	394	2,442	2,437	2,437	2.68	36.38	2,097	2,057	30.70	
1959	1623	12,800	June 1,	1959	315	1,683	1,696	1,696	1.87	25.33	1,995	2,015	30.10	
1960	1703	12,400	Feb. 6,	Mar. 31	340	2,462	2,457	2,457	1.86	36.77	2,282	2,266	33.91	
1961	1703	-	-	-	-	-	-	-	-	-	-	-	-	-

^a Adjusted for change in contents in Burton and Mathis Reservoirs.

1845. Whitewater River at Jocassee, S. C.

Location--Lat 34°58'19", long 82°56'24", on right bank at highway bridge at Jocassee, Oconee County, 0.8 mile upstream from confluence with Toxaway River.

Drainage area--47.3 sq mi.

Records available--January 1951 to September 1960.

Gage--Water-stage recorder. Datum of gage is 777.79 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge--9 years (1951-60), 170 cfs.

Extremes--1951-60: Maximum discharge, 7,120 cfs Mar. 11, 1952 (gage height, 11.17 ft), from rating curve extended above 1,600 cfs on basis of velocity-area studies; minimum, 22 cfs Dec. 17, 1955; minimum gage height, 1.40 ft Oct. 20, 1951.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	110	140	200	214	137	121	82.8	62.2	58.4	-
1952	64.0	137	306	190	243	503	282	169	123	74.3	153	77.9	194
1953	56.5	97.0	118	251	355	352	176	194	112	151	100	87.8	171
1954	56.6	73.7	222	319	202	207	225	144	103	59.0	50.7	32.2	141
1955	37.9	60.1	150	108	236	168	259	296	141	129	114	56.6	146
1956	51.2	46.2	46.9	43.0	234	165	215	122	74.4	110	54.3	71.9	102
1957	85.5	87.5	156	187	324	221	395	144	159	93.8	54.7	107	166
1958	193	293	273	243	237	237	325	308	122	232	134	78.8	223
1959	66.4	58.7	73.3	143	146	187	261	337	258	218	122	163	169
1960	325	205	202	236	367	274	288	162	121	138	182	131	219

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	2.69	3.06	4.88	5.04	3.34	2.86	2.02	1.52	1.37	-
1952	1.56	3.24	7.46	4.64	5.54	12.26	6.65	4.12	2.90	1.81	3.72	1.84	55.74
1953	1.37	2.29	2.67	6.12	8.04	8.58	4.15	4.73	2.64	3.68	2.43	2.08	48.98
1954	1.38	1.74	5.41	7.77	4.45	5.05	5.31	3.50	2.43	1.44	1.23	.76	40.47
1955	.92	1.42	3.66	2.63	5.20	4.09	6.11	7.22	3.32	3.15	2.78	1.38	41.88
1956	1.24	1.09	1.14	1.05	5.34	4.02	5.08	2.97	1.75	2.69	1.33	1.70	29.40
1957	2.09	2.06	3.80	4.55	7.13	5.38	9.32	3.50	3.75	2.28	1.34	2.52	47.72
1958	4.70	6.91	6.65	5.93	5.22	5.78	7.66	7.50	2.88	5.65	3.26	1.66	64.00
1959	1.61	1.38	1.79	3.48	3.22	4.55	6.16	8.21	6.08	5.32	2.97	3.85	48.62
1960	7.92	4.83	4.92	5.75	8.37	6.68	6.80	3.94	2.86	3.37	4.44	3.09	62.97

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1433	-	-	-	-	-	-	136	39.06
1952	1433	7,120	Mar. 11, 1952	36	194	4.10	55.74	174	50.01
1953	1433	3,200	Feb. 21, 1953	44	171	3.62	48.98	178	50.98
1954	1433	3,120	Jan. 22, 1954	25	141	2.96	40.47	132	37.94
1955	1433	2,440	Feb. 6, 1955	24	146	3.09	41.88	137	39.35
1956	1433	2,020	Apr. 15, 1956	34	102	2.16	29.40	118	33.88
1957	1503	3,120	Apr. 4, 1957	39	166	3.51	47.72	202	58.03
1958	1553	2,610	Dec. 20, 1957	64	223	4.71	64.00	176	50.52
1959	1623	2,060	May 31, 1959	43	169	3.57	48.62	214	61.51
1960	1703	2,520	Oct. 9, 1959	78	219	4.63	62.97	-	-

1850. Keowee River near Jocassee, S. C.

Location (revised).--Lat 34°57'21", long 82°54'41", on right bank 0.6 mile downstream from bridge on State Highway 11, 1.8 miles southeast of Jocassee, Oconee County, and 2.6 miles upstream from Eastatoe Creek.

Drainage area.--148 sq mi.

Records available.--December 1949 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 737.43 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--10 years (1950-60), 462 cfs.

Extremes.--1949-60: Maximum discharge, 18,400 cfs Mar. 11, 1952 (gage height, 16.23 ft), from rating curve extended above 8,500 cfs by velocity-area studies and logarithmic plotting; minimum, 57 cfs Oct. 7, 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	425	281	536	312	424	606	647	397	361	273	169	168	366
1952	155	385	851	537	636	1,427	760	446	313	192	394	183	524
1953	133	269	344	708	1,039	930	466	546	343	393	273	239	471
1954	144	199	657	914	574	648	651	377	258	153	122	72.8	397
1955	73.0	115	373	262	632	434	679	798	362	391	351	187	367
1956	139	136	135	117	675	458	630	359	222	270	144	176	266
1957	212	220	435	485	641	600	1,066	362	499	267	173	311	454
1958	556	692	815	718	688	690	948	691	397	711	399	238	661
1959	206	186	222	453	441	531	684	681	721	535	301	398	463
1960	831	496	527	616	1,029	765	617	439	348	357	466	371	587

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3.31	2.12	4.17	2.43	2.98	4.72	4.88	3.09	2.87	2.12	1.48	1.27	35.44
1952	1.21	2.90	6.63	4.18	4.64	11.11	5.74	3.47	2.35	1.50	3.07	1.38	48.18
1953	1.05	2.03	2.68	5.51	7.31	7.24	3.51	4.25	2.59	3.07	2.12	1.80	43.16
1954	1.12	1.50	5.12	7.12	4.04	5.05	4.91	2.94	1.94	1.19	.95	.55	36.43
1955	.57	.87	2.90	2.04	4.45	3.38	5.12	6.21	2.73	3.04	2.73	1.41	35.45
1956	1.08	1.03	1.05	.91	4.92	3.56	4.75	2.80	1.67	2.10	1.12	1.33	26.32
1957	1.65	1.66	3.39	3.78	5.92	4.67	8.03	2.97	3.76	2.08	1.35	2.34	41.60
1958	4.32	6.73	6.35	5.59	4.84	5.37	7.15	6.94	2.91	5.53	3.11	1.80	60.64
1959	1.60	1.41	1.73	3.53	3.10	4.14	5.16	6.86	5.43	4.16	2.34	3.00	42.46
1960	6.47	3.74	4.10	4.80	7.50	5.96	6.16	3.42	2.62	2.78	3.63	2.80	53.98

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	533	48.89
1951	1433	7,700	Dec. 7, 1950	126	386	2.61	35.44	399	36.58
1952	1433	18,400	Mar. 11, 1952	92	524	3.54	48.18	470	43.20
1953	1433	9,840	Feb. 21, 1953	111	471	3.18	43.16	492	45.14
1954	1433	9,190	Jan. 22, 1954	58	397	2.69	36.43	360	33.03
1955	1433	7,100	Feb. 6, 1955	57	387	2.61	35.45	374	34.27
1956	1433	5,780	Apr. 16, 1956	84	286	1.93	26.32	325	29.86
1957	1503	8,540	Apr. 4, 1957	98	454	3.07	41.60	570	52.30
1958	1553	6,260	Dec. 20, 1957	190	661	4.47	60.64	523	47.98
1959	1623	5,900	Apr. 12, 1959	142	463	3.13	42.46	568	52.03
1960	1703	5,540	Feb. 5, 1960	215	587	3.97	53.98	-	-

1855. Keowee River near Newry, S. C.

Location (revised).--Lat 34°44'09", long 82°52'19", on left bank 800 ft downstream from Lawrence Bridge, 0.7 mile upstream from Sixmile Creek, and 2½ miles east of Newry, Oconee County.

Drainage area.--455 sq mi.

Records available.--October 1939 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 625.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--21 years (1939-60), 1,140 cfs.

Extremes.--1939-60: Maximum discharge, 25,200 cfs Aug. 13, 1940; maximum gage height, 24.60 ft Aug. 13, 1940; minimum discharge, 120 cfs Oct. 8, 1954; minimum daily, 152 cfs Oct. 8, 14, 1954.

Remarks.--Some regulation at low flow by powerplant above station. Records of chemical analyses and water temperatures for the period October 1953 to September 1954 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	832	467	1,111	814	957	1,464	1,550	918	937	598	426	422	874
1952	393	912	2,297	1,184	1,455	3,881	1,848	1,193	848	340	372	490	1,319
1953	342	596	777	1,551	2,328	1,985	1,128	1,611	1,147	966	617	660	1,135
1954	454	555	1,910	2,714	1,618	1,566	1,396	1,065	748	395	289	188	1,074
1955	202	355	831	650	1,544	638	1,249	1,329	575	624	625	325	740
1956	345	341	317	302	1,912	1,144	1,838	1,003	539	696	365	459	765
1957	483	486	927	1,126	1,991	1,434	2,511	847	1,129	656	351	712	1,043
1958	1,227	1,965	1,795	1,590	1,792	1,624	2,015	1,975	963	1,615	891	516	1,496
1959	544	508	575	1,009	1,077	1,170	1,572	1,757	1,693	1,091	641	850	1,039
1960	1,497	1,027	1,169	1,457	2,536	2,182	2,088	1,260	895	837	1,033	836	1,397

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.11	1.15	2.81	2.06	2.19	3.71	3.80	2.33	2.30	1.51	1.08	1.03	26.08
1952	1.00	2.23	5.82	3.00	3.45	9.79	4.53	3.02	2.08	.86	2.47	1.20	39.45
1953	.87	1.46	1.97	3.93	5.33	5.03	2.77	4.08	2.81	2.44	1.57	1.82	33.88
1954	1.15	1.36	4.84	6.87	3.71	3.97	3.42	2.70	1.83	1.00	.73	.46	32.04
1955	.51	.87	2.11	1.65	3.53	1.61	3.06	3.37	1.41	1.58	1.58	.80	22.08
1956	.87	.84	.80	.77	4.53	2.89	4.51	2.54	1.32	1.76	.92	1.13	22.88
1957	1.22	1.19	2.35	2.85	4.56	3.63	6.16	2.14	2.77	1.61	.89	1.74	31.11
1958	3.11	4.82	4.55	4.02	4.10	4.12	4.94	5.00	2.36	4.09	2.26	1.26	44.63
1959	1.38	1.25	1.45	2.56	2.47	2.96	3.85	4.45	4.15	2.77	1.63	2.09	31.01
1960	3.79	2.52	2.96	3.69	6.01	5.53	5.12	3.19	2.20	2.12	2.62	2.05	41.80

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,234	36.84
1951	1203	13,000	Dec. 7, 1950	233	874	1.92	26.08	1,974	29.06
1952	1233	22,000	Mar. 11, 1952	175	1,319	2.90	39.45	1,160	34.70
1953	1273	16,300	Feb. 21, 1953	248	1,135	2.49	33.88	1,238	36.93
1954	1333	19,700	Jan. 22, 1954	156	1,074	2.36	32.04	945	28.18
1955	1383	17,500	Feb. 6, 1955	152	740	1.63	22.08	708	21.10
1956	1433	14,900	Apr. 16, 1956	178	765	1.68	22.88	840	25.13
1957	1503	16,300	Apr. 5, 1957	202	1,043	2.29	31.11	1,302	38.93
1958	1553	10,800	Nov. 19, 1957	402	1,496	3.29	44.63	1,215	36.23
1959	1623	14,400	Apr. 12, 1959	376	1,039	2.28	31.01	1,213	36.20
1960	1703	13,300	Mar. 30, 1960	510	1,397	3.07	41.80	-	-

1860. Twelvemile Creek near Liberty, S. C.

Location.--Lat 34°48'05", long 82°44'55", on left bank 40 ft downstream from State highway bridge, 0.8 mile downstream from Rices Creek, and 3.4 miles west of Liberty, Pickens County.

Drainage area.--106 sq mi.

Records available.--July 1954 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 822.185 ft above mean sea level (levels by Soil Conservation Service).

Average discharge.--6 years (1954-60), 172 cfs.

Extremes.--1954-60: Maximum discharge, 2,930 cfs Apr. 5, 1957 (gage height, 9.80 ft); minimum, 30 cfs Sept. 28, 1955 (gage height, 1.79 ft).

Remarks.--Storm runoff at gage affected by several small flood-detention reservoirs on tributary streams.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	54.3	36.7	-
1955	58.0	67.4	118	117	257	113	179	196	93.8	82.6	54.5	41.5	112
1956	55.6	66.3	54.3	55.0	337	198	306	131	81.7	94.7	54.9	68.0	124
1957	70.8	107	138	207	274	185	299	110	115	67.8	63.4	116	145
1958	136	240	207	224	281	272	341	331	196	259	164	106	230
1959	105	109	134	136	197	225	318	216	237	162	132	162	177
1960	215	138	195	255	401	412	373	231	189	156	196	215	247

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	0.59	0.39	-
1955	0.41	0.71	1.28	1.27	2.52	1.23	1.89	2.13	0.99	0.90	.59	.44	14.36
1956	.61	.70	.59	.60	3.43	2.16	3.22	1.43	.86	1.03	.60	.72	15.95
1957	.77	1.13	1.50	2.25	2.69	2.02	3.15	1.20	1.20	.74	.69	1.22	18.56
1958	1.48	2.52	2.25	2.43	2.76	2.96	3.59	3.60	2.08	2.81	1.79	1.12	29.37
1959	1.14	1.15	1.45	1.48	1.94	2.44	3.35	2.35	2.50	1.76	1.44	1.71	22.71
1960	2.34	1.45	2.12	2.78	4.08	4.48	3.93	2.51	1.99	1.70	2.13	2.26	31.77

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-
1954	1433	-	-	-	-	-	-	-	-
1955	1433	2,880	Feb. 7, 1955	32	112	1.06	14.36	108	13.86
1956	1433	2,760	Apr. 16, 1956	35	124	1.17	15.95	136	17.45
1957	1503	2,930	Apr. 5, 1957	39	145	1.37	18.56	167	21.41
1958	1553	1,380	July 9, 1958	71	230	2.17	29.37	210	26.86
1959	1623	2,710	June 1, 1959	74	177	1.67	22.71	194	24.88
1960	1703	2,490	Mar. 31, 1960	83	247	2.33	31.77	-	-

1870. Seneca River near Anderson, S. C.

Location.--Lat 34°29'10", long 82°49'45", on right bank 0.25 mile downstream from bridge on State Highway 80, 1.9 miles downstream from Deep Creek, 4.2 miles upstream from confluence with Tugaloo River, and 10 miles west of Anderson, Anderson County.

Drainage area.--1,026 sq mi.

Records available.--June 1928 to January 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Altitude of gage is 520 ft (from Corps of Engineers profile). May 28, 1928, to Jan. 23, 1929, staff gage and Jan. 24, 1929, to Oct. 12, 1933, water-stage recorder, at site 15 ft downstream at same datum.

Average discharge.--31 years (1928-59), 1,997 cfs.

Extremes.--1928-60: Maximum discharge, 81,100 cfs Aug. 17, 18, 1928 (gage height, 25.73 ft, from graph based on gage readings), from rating curve extended above 18,000 cfs by logarithmic plotting; minimum, 105 cfs Sept. 17, 1939; minimum daily, 170 cfs Sept. 20, 1931.

Remarks.--Some regulation at low flow by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,858	1,207	2,073	1,353	1,588	2,243	2,039	1,443	1,563	1,047	883	871	1,514
1952	697	1,269	3,740	2,066	2,374	7,220	3,007	1,851	1,422	942	1,453	814	2,244
1953	678	909	1,179	2,425	4,204	3,077	1,762	2,404	1,572	1,226	898	980	1,761
1954	787	846	2,515	4,337	2,146	2,636	2,377	1,574	1,220	786	553	508	1,675
1955	325	616	1,158	1,200	2,588	1,447	2,055	2,025	1,143	1,056	909	517	1,244
1956	562	598	617	615	3,198	2,384	3,481	1,787	911	1,114	570	891	1,385
1957	784	1,038	1,566	1,778	3,112	2,451	3,901	1,569	1,807	681	1,141	1,141	1,717
1958	1,900	3,206	2,602	2,568	3,058	3,144	3,702	3,263	1,823	2,815	1,602	951	2,524
1959	951	911	1,108	1,631	1,964	2,124	3,014	2,266	2,684	1,616	988	1,699	1,739
1960	2,371	1,858	2,214	2,767	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.09	1.32	2.35	1.52	1.61	2.52	2.22	1.63	1.70	1.18	0.99	0.95	20.06
1952	.78	1.38	4.21	2.32	2.49	8.12	3.27	2.08	1.55	1.06	1.64	.88	29.78
1953	.76	.99	1.33	2.72	4.27	3.46	1.92	2.70	1.71	1.37	1.01	1.07	23.51
1954	.88	.92	2.82	4.88	2.18	2.96	2.59	1.76	1.33	.88	.62	.33	22.15
1955	.37	.67	1.30	1.35	2.62	1.63	2.23	2.27	1.24	1.19	1.02	.56	16.45
1956	.63	.65	.69	.69	3.36	2.68	3.78	2.01	.99	1.26	.64	.97	18.35
1957	.88	1.13	1.76	1.99	3.16	2.76	4.24	1.76	.96	1.04	.78	1.24	22.70
1958	2.13	3.48	2.93	2.88	3.10	3.53	4.03	3.67	1.99	2.82	1.80	1.03	33.39
1959	1.05	.99	1.24	1.83	1.99	2.59	3.28	2.55	2.92	1.82	1.11	1.85	23.02
1960	2.66	2.02	2.49	3.11	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	2,011	26.64
1951	1203	13,900	Oct. 21, 1950	542	1,514	1.48	20.06	1,562	20.69
1952	1233	32,000	Mar. 12, 1952	489	2,244	2.19	29.78	1,996	26.49
1953	1273	23,200	Feb. 22, 1953	583	1,761	1.72	23.51	1,879	24.85
1954	1333	23,600	Jan. 23, 1954	215	1,675	1.63	22.15	1,502	19.87
1955	1383	18,400	Feb. 7, 1955	231	1,244	1.21	16.45	1,217	16.08
1956	1433	18,000	Apr. 17, 1956	342	1,383	1.35	18.35	1,518	20.15
1957	1503	22,200	Apr. 6, 1957	320	1,717	1.67	22.70	2,078	27.47
1958	1553	12,800	Nov. 20, 1957	749	2,524	2.46	33.39	2,127	28.13
1959	1623	15,300	Apr. 13, 1959	646	1,739	1.69	23.02	2,033	26.91
1960	1703	-	-	-	-	-	-	-	-

1875. Savannah River near Iva, S. C.

Location.--Lat 34°15', long 82°45', on left bank at downstream side of bridge on State Highway 184, half a mile upstream from Little Generostee Creek, 5.8 miles southwest of Iva, Anderson County, and at mile 281.5 upstream from Savannah, Ga.

Drainage area.--2,231 sq mi.

Records available.--October 1949 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 432.255 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--11 years (1949-60), 4,067 cfs.

Extremes.--1949-60: Maximum discharge, 54,400 cfs Mar. 12, 1952 (gage height, 12.74 ft); minimum, 220 cfs Aug. 24, 1959 caused by construction work above station; minimum daily, 493 cfs Aug. 24, 1959.

Remarks.--Some regulation by Burton and Mathis Reservoirs, powerplants above station, and since 1959 by construction of Hartwell Reservoir. Records of chemical analyses and water temperatures for the period October 1951 to September 1952 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4,354	3,012	4,389	2,896	3,422	4,761	5,025	3,754	3,804	2,485	2,155	1,875	3,496
1952	1,586	2,782	7,575	4,597	5,393	15,240	6,815	4,577	3,118	2,119	3,514	1,960	4,934
1953	1,688	2,042	2,822	5,347	8,349	6,858	4,194	5,417	3,289	3,046	2,152	2,223	3,927
1954	2,027	2,049	5,646	8,792	4,783	5,774	5,447	5,472	2,978	1,862	1,497	1,183	3,796
1955	686	1,502	2,659	2,733	5,306	3,244	4,426	3,690	2,349	2,665	2,403	1,456	2,793
1956	1,536	1,835	1,733	1,486	5,644	4,555	6,407	3,891	2,160	2,598	1,546	2,676	2,988
1957	2,018	2,267	3,233	3,968	5,911	4,843	7,795	3,552	3,612	2,330	1,838	2,185	3,607
1958	3,732	6,992	5,825	5,510	6,012	6,269	7,834	6,792	3,717	5,388	3,521	2,280	5,318
1959	2,459	2,199	2,490	3,304	3,852	4,066	5,400	4,730	6,048	3,660	1,908	3,714	3,643
1960	5,497	4,086	4,628	5,819	8,835	7,224	7,990	4,685	3,642	3,157	3,872	3,389	5,221

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	4,565	27.77
1951	1203	27,200	Oct. 21, 1950	1,020	3,496	1.57	21.27	3,512	21.38
1952	1233	54,400	Mar. 12, 1952	874	4,934	2.21	30.12	4,480	27.32
1953	1273	36,800	Feb. 22, 1953	1,080	3,927	1.76	23.89	4,197	25.54
1954	1333	44,200	Jan. 16, 1954	591	3,796	1.70	23.08	3,417	20.78
1955	1393	34,000	Feb. 7, 1955	540	2,793	1.25	16.99	2,780	16.91
1956	1433	31,200	Mar. 16, Apr. 16	733	2,988	1.34	18.23	3,192	19.47
1957	1503	34,800	Apr. 6, 1957	760	3,607	1.62	21.93	4,361	26.50
1958	1553	32,000	Nov. 19, 1957	1,300	5,318	2.38	32.34	4,533	27.58
1959	1623	22,000	Apr. 13, June 1	493	3,643	1.63	22.16	4,238	25.77
1960	1703	12,300	Apr. 6, 1960	2,040	5,221	2.34	31.87	-	-

1880. Rocky River near Calhoun Falls, S. C.

Location.--Lat 34°08', long 82°38', on right bank 2,000 ft upstream from Swanigan Mill bridge on county road, 3½ miles northwest of Calhoun Falls, Abbeville County, and 3¼ miles upstream from mouth.

Drainage area.--267 sq mi.

Records available.--February 1950 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 403.04 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--10 years (1950-60), 249 cfs.

Extremes.--1950-60: Maximum discharge, 9,450 cfs Mar. 25, 1952 (gage height, 9.44 ft), from rating curve extended above 3,300 cfs by velocity-area studies and logarithmic plotting; minimum daily, 9 cfs Sept. 21, 22, 1954.

Remarks.--Flow regulated by Lake Secession (usable capacity, about 1,742,000,000 cu ft). City of Abbeville diverts a small amount of water for municipal supply. Diversion started in 1957.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	168	143	187	161	186	226	325	248	183	141	115	106	181
1952	73.7	125	291	294	323	1,378	364	213	152	107	192	176	309
1953	151	138	159	258	426	548	358	412	204	136	65.4	99.4	242
1954	155	128	301	619	337	293	285	245	143	130	102	46.6	232
1955	38.3	55.5	93.8	145	425	291	134	137	99.2	114	147	105	147
1956	110	116	105	99.4	200	485	497	204	108	97.2	111	377	208
1957	285	159	186	250	321	291	362	231	186	144	142	116	222
1958	108	742	474	314	415	503	746	435	170	169	168	147	365
1959	168	132	144	165	230	289	292	288	272	157	158	344	219
1960	311	238	228	722	906	567	447	207	192	225	195	174	366

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1233	1,240	Dec. 7, 1950	24	181	-	-	180	-
1952	1233	9,450	Mar. 25, 1952	39	309	-	-	303	-
1953	1273	2,240	Mar. 23, 1953	44	242	-	-	255	-
1954	1353	2,880	Jan. 23, 1954	9	232	-	-	199	-
1955	1383	2,700	Feb. 6, 1955	14	147	-	-	159	-
1956	1433	4,110	Sept. 27, 1956	26	208	-	-	234	-
1957	1503	1,260	Apr. 5, 1957	18	222	-	-	279	-
1958	1553	5,000	Nov. 20, 1957	55	365	-	-	291	-
1959	1623	3,860	Sept. 7, 1959	43	219	-	-	247	-
1960	1703	3,560	Feb. 14, 1960	84	366	-	-	-	-

1885. South Beaverdam Creek at Dewy Rose, Ga.

Location.--Lat 34°11', long 82°57', on left bank 50 ft upstream from highway bridge, 1 mile northeast of Dewy Rose, Elbert County, and 3 miles upstream from confluence with North Beaverdam Creek.

Drainage area.--35.8 sq mi.

Records available.--October 1942 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 581.07 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 20, 1952, staff gage at same site and datum.

Average discharge.--18 years (1942-60), 47.9 cfs.

Extremes.--1942-60: Maximum discharge, 2,600 cfs Jan. 18, 1943 (gage height, 13.4 ft, from graph based on gage readings); minimum, 0.80 cfs Sept. 22, 1954. Floods of Aug. 25, 1852, and Aug. 25, 1908, reached a stage of about 23.6 ft, from information by local residents. Flood of Aug. 15, 1928, reached a stage of 17.8 ft, from floodmark.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	77.6	26.4	47.4	35.9	40.6	53.1	47.7	25.4	36.8	34.6	19.5	16.8	38.6
1952	11.9	18.9	100	40.3	54.3	183	60.4	40.3	26.0	18.0	33.3	15.1	50.4
1953	12.9	16.2	24.5	90.8	102	84.3	46.4	55.5	23.4	20.5	14.5	19.9	42.2
1954	18.4	19.2	59.6	78.0	37.2	39.2	43.2	26.3	20.0	11.1	5.50	2.07	30.0
1955	2.82	11.7	27.2	42.4	67.6	32.2	36.5	24.1	19.6	19.8	16.9	8.67	25.5
1956	10.6	13.8	14.7	19.4	58.4	79.3	68.1	25.4	11.2	14.5	11.0	39.2	30.2
1957	22.3	22.7	31.5	42.6	41.4	51.6	72.3	33.2	32.1	17.1	9.51	15.5	32.6
1958	33.0	137	59.9	59.2	73.2	91.5	128	60.8	33.0	39.1	27.0	15.5	62.8
1959	16.4	17.1	19.1	26.5	56.6	53.0	50.8	42.9	45.6	31.6	14.2	23.1	32.9
1960	25.7	26.6	36.3	98.3	129	78.4	78.1	39.5	24.7	42.7	26.4	27.6	52.5

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.50	0.82	1.52	1.15	1.18	1.71	1.48	0.82	1.15	1.11	0.63	0.52	14.59
1952	.38	.59	3.22	1.30	1.64	5.89	1.89	1.30	.81	.58	1.07	.47	19.14
1953	.42	.51	.79	2.93	2.97	2.71	1.45	1.79	.73	.66	.47	.62	16.05
1954	.59	.60	1.91	2.51	1.08	1.26	1.35	.85	.62	.36	1.18	.06	11.37
1955	.09	.36	.88	1.36	1.97	1.04	1.14	.78	.61	.64	.54	.27	9.68
1956	.34	.43	.47	.62	1.76	2.52	2.12	.82	.35	.47	.35	1.22	11.47
1957	.72	.71	1.01	1.37	1.21	1.66	2.25	1.07	1.00	.55	.31	.48	12.34
1958	1.06	4.27	1.92	1.90	2.12	2.95	3.99	1.96	1.03	1.26	.87	.48	23.61
1959	.53	.53	.82	.85	1.65	1.71	1.58	1.38	1.42	1.02	.46	.72	12.47
1960	.83	.83	1.16	3.17	3.88	2.52	2.43	1.27	.77	1.37	.85	.86	19.94

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1203	1,880	Oct. 20, 1950	7.0	38.6	1.08	14.59	38.9	14.76
1952	1233	1,520	Mar. 4, 1952	9.7	50.4	1.41	19.14	36.9	13.94
1953	1273	760	Feb. 21, 1953	9.0	42.2	1.18	16.05	45.9	17.43
1954	1333	900	Jan. 17, 1954	1.0	30.0	.838	11.37	25.3	9.60
1955	1383	840	Feb. 7, 1955	1.0	25.5	.712	9.68	25.3	9.59
1956	1433	1,100	Mar. 17, 1956	4.0	30.2	.844	11.47	33.4	12.67
1957	1503	948	Apr. 6, 1957	5.1	32.6	.911	12.34	45.3	17.15
1958	1553	1,540	Nov. 19, 1957	12	62.8	1.75	23.81	48.1	18.24
1959	1623	436	June 1, 1959	10	32.9	.919	12.47	35.9	13.61
1960	1703	1,010	July 29, 1960	15	52.5	1.47	19.94	-	-

1890. Savannah River near Calhoun Falls, S. C.

Location.--Lat 34°04', long 82°38', on left bank 150 ft upstream from bridge on State Highway 72, 1 mile downstream from Seaboard Air Line Railroad bridge, 1½ miles downstream from Rocky River, 3 miles southwest of Calhoun Falls, Abbeville County, and at mile 264.7 upstream from Savannah, Ga.

Drainage area.--2,876 sq mi.

Records available.--August 1896 to August 1898, March 1899 to December 1900, January to December 1903, March 1930 to July 1932, April 1938 to September 1960. Published as "at Calhoun Falls," 1897-99. Records for January 1901 to December 1902, published in WSP 65, 75, and 83 have been found unreliable, and should not be used. Gage-height records collected at original site 1 mile upstream during 1899-1928 and at present site since 1928 are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 363.53 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 1, 1928, chain gage at railroad bridge 1 mile upstream at datum about 5.5 ft higher.

Average discharge.--25 years (1896-97, 1899-1900, 1930-31, 1938-60), 4,901 cfs.

Extremes.--1896-1900, 1903, 1930-32, 1938-60: Maximum discharge, 96,500 cfs Aug. 13, 1940 (gage height, 11.52 ft), from rating curve extended above 50,000 cfs by velocity-area studies and logarithmic plotting; minimum, 323 cfs Aug. 24, 1959, caused by construction work above station; minimum daily, 636 cfs Oct. 12, 1954.

Maximum stage known, 28.2 ft Aug. 25, 1908, original site and datum, from records of U.S. Weather Bureau (discharge, 114,000 cfs, from rating curve extended above 14,000 cfs by logarithmic plotting).

Remarks.--Some regulation by Burton and Mathis Reservoirs, powerplants above station, and since 1959 by construction of Hartwell Reservoir.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4,837	3,328	4,990	3,444	3,994	5,507	5,779	4,414	4,329	2,891	2,350	2,138	4,001
1952	1,728	3,086	8,060	5,015	6,330	16,910	7,387	5,014	5,649	2,434	3,640	2,363	5,478
1953	1,935	2,271	3,160	6,292	9,589	7,357	4,745	6,605	3,822	3,324	2,283	2,330	4,489
1954	2,161	2,121	6,607	9,577	5,394	6,416	6,283	4,235	3,402	2,106	1,611	1,216	4,262
1955	978	1,254	3,042	3,322	6,345	3,867	5,105	4,781	2,735	3,011	2,674	1,665	3,234
1956	1,760	2,077	2,023	1,889	6,763	6,126	7,824	4,187	2,396	2,755	1,685	3,285	3,543
1957	2,428	2,507	3,452	4,232	6,675	5,934	8,491	4,207	3,969	2,676	2,056	2,346	4,057
1958	4,316	8,310	6,531	6,146	6,830	7,142	9,266	7,653	4,184	5,521	3,914	2,624	6,029
1959	2,745	2,414	2,694	3,517	4,471	4,833	6,270	5,599	6,913	4,069	2,185	4,526	4,174
1960	5,736	4,339	4,942	7,253	10,380	8,259	9,299	5,454	4,153	3,739	4,324	3,703	5,948

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	5,084	24.02
1951	1203	28,800	Oct. 21, 1950	1,050	4,001	1.39	18.88	3,978	18.75
1952	1233	58,000	Mar. 24, 1952	1,030	5,478	1.90	25.93	5,013	23.74
1953	1273	38,400	Feb. 22, 1953	1,190	4,489	1.56	21.19	4,789	22.61
1954	1333	44,600	Jan. 17, 1954	695	4,262	1.48	20.11	3,809	17.97
1955	1383	40,200	Feb. 7, 1955	636	3,234	1.12	15.27	3,260	15.40
1956	1433	40,200	Sept. 26, 1956	842	3,543	1.23	16.78	3,756	17.77
1957	1503	38,100	Apr. 6, 1957	959	4,057	1.41	19.13	4,956	23.38
1958	1553	38,100	Nov. 19, 1957	1,630	6,029	2.10	28.45	5,084	24.00
1959	1623	32,800	June 2, 1959	641	4,174	1.45	19.69	4,778	22.52
1960	1703	19,600	Feb. 13, 1960	2,090	5,948	2.07	28.12	-	-

1890.5. North Fork Broad River subwatershed No. 1
(North Fork Broad River) above Toccoa, Ga.

Location.--Lat 34°34'25", long 83°22'00", in pool of flood-detention reservoir on left side of downstream headwall of arch culvert under county road (abandoned railroad embankment), 1½ miles west of Toccoa, Stephens County, and 2¼ miles upstream from Denmans Creek.

Drainage area.--3.66 sq mi.

Records available.--October 1958 to September 1960.

Gage.--Water-stage recorder and 3-foot square drop inlet in pool and 5-foot square drop inlet on upstream face of dam. Datum of gage is 894.84 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Soil Conservation Service).

Extremes.--1958-60: Maximum outflow, 47 cfs Apr. 12, 1959, Jan. 31, 1960; maximum gage height, 12.45 ft Apr. 12, 1959; no flow May 11, 1960, after pool was drained. Maximum inflow, 186 cfs (average for 15-minute interval) Sept. 7, 1959, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

Remarks.--Reservoir is formed by earth dam; dam completed and storage began in June 1958. Outlet structures are a 3-foot square drop inlet in pool connected to a 20-inch pipe leading to a 5-foot square drop inlet on upstream face of dam from which a 48-inch pipe carries the outflow through the dam. Top of 3-foot square drop inlet is at gage height 8.50 ft, top of 5-foot drop inlet is at gage height 20.0 ft, and emergency spillway at gage height 33.5 ft. There is an 18-inch diameter cleanout gate at bottom of 3-foot square drop inlet. Reservoir capacity at top of 3-foot drop inlet, 28.0 acre-ft, at top of 5-foot drop inlet 176 acre-ft, and at emergency spillway level, 554 acre-ft.

Monthly and annual mean outflow, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	3.38	3.21	2.95	3.47	4.80	4.97	7.15	5.45	4.44	3.81	2.80	4.84	4.26
1960	6.59	3.94	4.68	8.30	12.0	11.3	10.3	7.29	5.64	4.31	4.14	4.20	6.87

Contents, in acre-feet at end of month, of reservoir No. 1

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	31.6	31.3	31.1	30.9	31.1	31.6	31.4	54.0	31.0	32.0	31.3	31.2	-
1960	32.6	31.1	31.3	34.6	32.4	33.6	32.8	31.9	31.5	31.2	31.1	31.5	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept.30						Calendar year	
		Maximum outflow		Maximum inflow		Minimum daily outflow	Mean outflow		Mean outflow
		Discharge	Date	Discharge	Date				
1959	1623	47	Apr. 12, 1959	a186	Sept. 7, 1959	0.1	4.26		4.74
1960	1703	47	Jan. 31, 1960	b174	Feb. 5, 1960	0	6.87		-

a Average for 15-minute interval; computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

b Average for 5-minute interval; computed from outflow and change in reservoir contents, no rainfall on reservoir surface during time of peak inflow.

1891. North Fork Broad River subwatershed No. 2
(Denmans Creek) near Toccoa, Ga.

Location.--Lat 34°33', long 83°22', at edge of pool near right end of earthfill dam, 0.5 mile upstream from mouth and 3 miles west of Toccoa, Stephens County.

Drainage area.--0.74 sq mi.

Records available.--April 1956 to September 1960.

Gage.--Water-stage recorder and V-notch sharp-crested weir on concrete drop inlet. Datum of gage is 846.26 ft above mean sea level, datum of 1929 (levels by Soil Conservation Service).

Extremes.--1956-60: Maximum outflow, 36 cfs Apr. 12, 1959 (gage height, 7.24 ft); minimum, 0.15 cfs Sept. 21, 22, 1956 (gage height, 5.45 ft).

Remarks.--Reservoir is formed by earth dam; dam completed and storage began in April 1956. Outlet structure is a 3-foot square concrete drop inlet connected to a 20-inch concrete outlet pipe. A 120° V-notch sharp-crested weir is set on side of the drop inlet, with notch at gage height 5.20 ft. Top of drop inlet is at gage height 5.87 ft; emergency spillway at gage height 25.9 ft. There is an 18-inch diameter cleanout gate at the bottom of drop inlet at gage height -2.60 ft. Reservoir capacity at top of drop inlet, 15.9 acre-ft (revised). Capacity at emergency spillway level, 205 acre-ft (revised). In addition, about 0.6 sq mi of drainage area above station is partly controlled by abandoned railroad embankment which in effect acts as a flood-detention dam.

Monthly and annual mean outflow, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1956	-	-	-	-	-	-	-	1.02	0.415	0.915	0.569	0.437	-
1957	0.335	0.419	0.621	1.15	1.63	1.31	2.54	.896	.985	.535	.395	.528	0.938
1958	.831	1.75	1.27	1.23	1.88	2.12	2.31	2.08	1.07	1.08	.338	.585	1.41
1959	.802	.888	.679	.806	1.24	1.36	1.96	1.75	1.09	.666	.415	.748	1.01
1960	1.03	.853	.979	1.95	3.26	2.82	2.38	1.90	1.56	.985	1.03	1.03	1.64

Contents, in acre-feet, at end of month, of reservoir No. 2

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1956	-	-	-	-	-	-	17.9	17.6	17.4	17.7	17.2	17.4	-
1957	17.6	17.4	17.6	19.6	19.1	18.2	18.2	17.9	18.5	17.4	17.3	18.8	-
1958	17.6	18.5	18.2	18.6	18.8	18.8	18.7	18.3	17.8	17.7	17.9	17.7	-
1959	17.5	17.7	17.8	17.7	17.8	18.2	18.0	19.5	17.6	17.9	17.8	17.5	-
1960	18.4	17.8	17.9	19.0	18.6	19.0	18.8	18.2	18.1	17.9	17.9	18.2	-

Note.--Contents April 1956 to September 1957 not previously published.

Yearly discharge, in cubic feet per second

Daily discharge, in cubic feet per second									
Year	WSP	Water year ending Sept.30							Calendar year
		Maximum outflow		Maximum inflow		Minimum daily outflow	Mean outflow	Mean outflow	
		Discharge	Date	Discharge	Date				
1956	1503	-	-	-	-	-	-	-	-
1957	1503	35	Apr. 5, 1957	-	-	0.24	0.938	1.13	
1958	1553	27	Feb. 26, 1958	-	-	.36	1.41	1.28	
1959	1623	36	Apr. 12, 1959	-	-	.30	1.01	1.07	
1960	1703	33	Jan. 31, 1960	-	-	.38	1.64	-	

SAVANNAH RIVER BASIN

1895. North Fork Broad River near Toccoa, Ga.

Location.--Lat 34°31', long 83°19', on right bank 50 ft upstream from relocated bridge on State Highway 106, 1 mile downstream from Carnes Creek, and 5 miles south of Toccoa, Stephens County.

Drainage area.--19.3 sq mi.

Records available.--May 1954 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 750.41 ft above mean sea level, datum of 1929 (levels by U.S. Soil Conservation Service). Prior to July 14, 1960, at site 50 ft downstream at same datum.

Average discharge.--6 years (1954-60), 22.9 cfs.

Extremes.--1954-60: Maximum discharge, 1,060 cfs Feb. 6, 1955 (gage height, 8.33 ft); maximum gage height, 8.50 ft June 24, 1960 (backwater from construction); minimum discharge, 4.6 cfs Sept. 2, 3, 21, 1956.

Remarks.--The following table gives pertinent information on small flood-detention reservoirs which affected storm runoff at gage during short periods. This information supersedes that previously published in water-supply papers.

Number of reservoirs	Period in effect	Combined capacity, in acre-feet, at emergency spillway levels
1	Oct. 27, 1954, to Dec. 9, 1955	300
2	Dec. 10, 1955, to June 11, 1958	506
3	June 12, 1958, to May 19, 1959	1,060
4	May 20, 1959, to Sept. 30, 1960	1,250

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	24.8	23.2	13.9	10.2	7.07	-
1955	7.12	10.2	15.9	18.6	42.3	23.7	22.3	14.7	10.6	12.8	14.8	6.46	16.5
1956	6.84	9.24	9.14	9.67	42.8	35.9	43.6	19.2	10.3	19.4	9.35	12.5	18.9
1957	9.33	12.1	17.0	24.7	31.2	26.2	48.9	18.2	15.5	11.5	8.91	12.3	19.5
1958	17.4	32.8	27.6	26.0	41.7	56.4	41.2	32.5	18.7	26.5	28.3	15.0	28.5
1959	15.6	15.0	18.9	22.3	32.6	30.5	39.8	35.5	25.6	13.8	9.28	24.5	23.5
1960	22.9	18.1	21.4	41.7	61.5	50.0	40.3	28.9	22.5	17.9	22.0	21.4	30.6

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	0.43	0.59	0.95	1.11	2.28	1.42	1.29	1.48 .88	1.34 .61	0.83 .76	0.61 .88	0.41 .37	11.57
1956	.41	.53	.55	.58	2.39	2.14	2.52	1.15	.60	1.16	.56	.72	13.31
1957	.56	.70	1.02	1.48	1.69	1.57	2.82	1.09	.90	.69	.53	.71	13.76
1958	1.04	1.90	1.65	1.56	2.25	2.18	2.38	1.94	1.08	1.58	1.57	.92	20.05
1959	.93	.87	1.13	1.34	1.76	1.82	2.30	2.12	1.48	.82	.55	1.42	16.54
1960	1.37	1.05	1.28	2.49	3.44	2.99	2.33	1.73	1.30	1.07	1.31	1.24	21.60

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-
1955	1383	1,060	Feb. 6, 1955	5.2	16.5	0.855	11.57	15.8	11.09
1956	1433	830	Apr. 16, 1956	5.1	18.9	.979	13.31	20.0	14.10
1957	1503	640	Apr. 5, 1957	6.4	19.5	1.01	13.76	22.8	16.07
1958	1553	570	Feb. 26, 1958	12	28.5	1.48	20.05	26.1	18.39
1959	1623	730	Sept. 7, 1959	7.2	23.5	1.22	16.54	24.6	17.31
1960	1703	643	Feb. 5, 1960	9.4	30.6	1.59	21.60	-	-

1896. North Fork Broad River subwatershed No. 6
(Bear Creek) near Mize, Ga.

Location.--Lat 34°29', long 83°19', at edge of pool, 255 ft upstream from left end of earthen dam on Bear Creek, 1 mile upstream from mouth, and 2 miles east of Mize, Stephens County.

Drainage area.--3.62 sq mi.

Records available.--December 1956 to September 1960.

Gage.--Water-stage recorder and V-notch sharp-crested weir on concrete drop inlet. Datum of gage is 743.13 ft above mean sea level, datum of 1929 (levels by Soil Conservation Service).

Extremes.--1956-60: Maximum outflow, 38 cfs Apr. 5, 1957 (gage height, 12.1 ft); minimum, 0.88 cfs Aug. 14, 1957 (gage height, 7.64 ft). Maximum inflow, 396 cfs (average for 15-minute interval) May 31, 1959, computed from outflow and change in reservoir contents, negligible rainfall occurred on reservoir surface during time of peak inflow.

Remarks.--Reservoir is formed by earth dam; dam completed and storage began in November 1956. Outlet structure is a 3-foot square concrete drop inlet connected to a 20-inch concrete outlet pipe. Two 120° V-notch sharp-crested weirs are set on opposite sides of the drop inlet, with notches at gage height 7.33 ft. Top of drop inlet is at gage height 8.00 ft, emergency spillway at gage height 21.0 ft. There is an 18-inch diameter cleanout gate at bottom of drop inlet at gage height 0.50 ft. Reservoir capacity at top of drop inlet, 114 acre-ft (revised). Capacity at emergency spillway level, 846 acre-ft (revised).

Monthly and annual mean outflow in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	3.60	4.37	5.39	4.85	9.16	3.38	2.54	2.50	1.76	2.17	-
1958	3.55	7.12	4.92	4.68	7.10	6.59	7.66	5.46	3.25	6.68	4.65	2.97	5.37
1959	3.61	3.21	3.75	4.45	6.35	6.26	7.37	5.50	7.47	3.14	2.76	5.95	4.96
1960	4.52	3.22	3.79	6.90	10.6	7.43	6.18	4.85	4.04	5.19	3.95	4.07	5.38

Contents, in acre-feet, at end of month, of reservoir No. 6

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	113.1	115.7	129.2	120.8	116.8	116.8	115.1	118.6	111.0	109.9	115.7	-
1958	113	119	117	119	129	122	121	117	113	116	115	115	-
1959	114	117	118	117	117	120	117	225	114	114	122	115	-
1960	119	116	117	161	120	125	122	118	117	118	115	119	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept.30						Calendar year
		Maximum outflow		Maximum inflow <u>a</u> /		Minimum daily outflow	Mean outflow	Mean outflow
		Discharge	Date	Discharge	Date			
1957	1503	b38	Apr. 5, 1957	b287	Apr. 5, 1957	b0.88	-	4.29
1958	1553	36	Feb. 27, 1958	316	July 14, 1958	2.1	5.37	4.96
1959	1623	37	May 31,Sept.7	396	May 31, 1959	1.5	4.96	5.04
1960	1703	36	Feb. 5, 1960	249	Feb. 5, 1960	2.1	5.38	-

^a Average for 15-minute interval; computed from outflow and change in reservoir contents; adjusted for rainfall on reservoir surface during time of peak outflow.

^b For period December 1956 to September 1957.

Note.--Figures of monthly and yearly outflow in cubic feet per second per square mile and runoff in inches, published in WSP 1503 for December 1956 to September 1957, are subject to error due to possible losses in storage in subwatershed reservoir No. 6. Those figures are not published herein and should not be used.

1900. North Fork Broad River near Lavonia, Ga.

Location.--Lat 34°27', long 83°14', on right bank at bridge on county road 2.1 miles upstream from Toms Creek and 7.8 miles west of Lavonia, Franklin County.

Drainage area.--42.0 sq mi.

Records available.--May 1954 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 680.36 ft above mean sea level, datum of 1929 (levels by Soil Conservation Service).

Average discharge.--6 years (1954-60), 50.9 cfs.

Extremes.--1954-60: Maximum discharge, 1,500 cfs Feb. 7, 1955 (gage height, 11.80 ft); minimum, 7.2 cfs Sept. 22-24, 1955.

Flood in 1933 reached a stage of 17.5 ft, and flood in 1950 reached a stage of 15.5 ft, from information by local residents.

Remarks.--The following table gives pertinent information on small flood-detention reservoirs which affected storm runoff at gage during short periods. This information supersedes that previously published in water-supply papers.

Number of reservoirs	Period in effect	Combined capacity, in acre-feet, at emergency spillway levels
1	Oct. 27, 1954, to Dec. 9, 1955	300
3	Dec. 10, 1955, to Oct. 5, 1956	922
4	Oct. 6, 1956, to Dec. 17, 1957	1,780
5	Dec. 18, 1957, to June 11, 1958	3,380
6	June 12, 1958, to May 19, 1959	3,930
7	May 20, 1959, to Sept. 30, 1960	4,110

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	15.4	25.7	45.0	50.2	95.8	51.8	50.9	32.0	22.7	28.8	27.3	11.6	37.7
1956	14.6	20.1	19.3	21.8	90.2	80.8	93.6	40.1	21.1	41.1	17.5	29.4	40.5
1957	23.4	30.9	40.7	53.3	68.5	60.8	101	38.1	31.3	25.5	17.8	25.7	42.7
1958	44.0	76.8	65.0	57.3	80.8	83.2	95.8	66.3	37.6	60.5	55.5	33.6	62.6
1959	36.4	34.4	40.9	48.7	72.0	75.3	84.1	69.4	70.4	35.8	24.8	59.2	54.0
1960	54.4	38.0	47.3	90.4	129	108	96.6	63.6	52.7	45.1	46.6	46.1	68.0

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	0.42	0.68	1.23	1.38	2.37	1.42	1.35	1.44 .88	1.45 .60	0.72 .79	0.69 .75	0.46 .31	12.18
1956	.40	.53	.53	.60	2.32	2.21	2.49	1.10	.56	1.13	.48	.78	13.13
1957	.64	.82	1.12	1.46	1.64	1.67	2.68	1.05	.83	.70	.49	.66	13.78
1958	1.21	2.04	1.73	1.57	2.00	2.28	2.49	1.82	1.00	1.66	1.52	.89	20.21
1959	1.00	.91	1.12	1.34	1.78	2.06	2.23	1.90	1.87	.98	.68	1.57	17.44
1960	1.50	1.01	1.30	2.48	3.31	2.96	2.57	1.74	1.40	1.23	1.28	1.23	22.01

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-
1954	1383	-	-	-	-	-	-	-	-
1955	1383	1,500	Feb. 7, 1955	7.6	37.7	0.898	12.18	35.0	11.31
1956	1433	1,060	Apr. 16, 1956	9.3	40.5	.964	13.13	44.0	14.24
1957	1503	950	Apr. 5, 1957	11	42.7	1.02	13.78	50.1	16.18
1958	1553	570	Apr. 15, Aug. 24	26	62.6	1.49	20.21	56.6	18.26
1959	1623	1,060	May 31, 1959	20	54.0	1.29	17.44	56.4	18.22
1960	1703	1,010	Feb. 5, 1960	25	68.0	1.62	22.01	-	-

1901. North Fork Broad River subwatershed No. 11 (Toms Creek) near Eastanollee, Ga.

Location.--Lat 34°29', long 83°15', at edge of pool, about 750 ft upstream from left end of earthfill dam, 2 miles south of Eastanollee, Stephens County, and 4 miles upstream from mouth.

Drainage area.--3.79 sq mi.

Records available.--October 1956 to September 1960.

Gage.--Water-stage recorder and V-notch sharp-crested weir on concrete drop inlet. Datum of gage is 730.60 ft above mean sea level, datum of 1929 (levels by Soil Conservation Service).

Extremes.--1956-60: Maximum outflow, 30 cfs Aug. 25, 1958, Apr. 12, May 31, 1959; maximum gage height, 13.30 ft Apr. 5, 1957 (backwater from debris); minimum outflow, 0.95 cfs Sept. 7, 1957 (gage height, 8.67 ft). Maximum inflow, 376 cfs (average for 15-minute interval) Apr. 12, 1959, computed from outflow and change in reservoir contents; negligible rainfall occurred on reservoir surface during time of peak inflow.

Remarks.--Reservoir is formed by earth dam; dam completed and storage began in August 1956. Outlet structure is a 3-foot square concrete drop inlet connected to a 20-inch concrete outlet pipe. Two 120° V-notch sharp-crested weirs are set on opposite sides of the drop inlet, with notches at gage height 8.33 ft. Top of drop inlet is at gage height 9.00 ft, emergency spillway at gage height 21.2 ft. There is an 18-inch diameter cleanout gate at bottom of drop inlet at gage height 2.50 ft. Reservoir capacity at top of drop inlet, 141 acre-ft (revised). Capacity at emergency spillway level, 302 acre-ft (revised).

Monthly and annual mean outflow, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	2.09	3.48	3.38	4.25	5.60	4.77	9.19	3.12	2.80	2.29	1.57	2.38	3.72
1958	4.96	7.46	5.17	5.03	6.50	6.50	7.45	5.24	3.45	5.86	5.47	3.08	5.51
1959	3.55	3.35	4.06	4.62	6.22	6.12	7.63	5.01	5.76	3.65	1.95	3.75	4.62
1960	4.16	2.97	3.55	6.21	9.09	7.34	6.95	4.79	4.97	3.57	4.01	4.07	5.12

Contents, in acre-feet, at end of month, of reservoir No. 11

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	110.6	110.8	112.4	124.6	118.7	114.0	114.0	113.2	118.1	109.0	107.7	112.9	-
1958	112	115	114	117	120	120	117	114	111	113	113	112	-
1959	112.4	114.0	115.0	114.5	114.5	116.2	114.5	199.7	111.1	111.4	114.5	112.9	-
1960	116.2	112.9	114.0	159.3	116.2	124.9	119.3	114.2	114.2	113.7	112.4	115.6	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Maximum outflow		Maximum inflow a/		Minimum daily outflow	Mean outflow	Mean outflow	
		Discharge	Date	Discharge	Date				
1957	1503	29	Apr. 11, 1957	335	Apr. 5, 1957	0.95	3.72	4.44	
1958	1553	30	Aug. 25, 1958	360	Aug. 24, 1958	2.3	5.51	4.96	
1959	1623	30	Apr. 12, May 31	376	Apr. 12, 1959	1.5	4.62	4.60	
1960	1703	29	Jan. 31, Feb. 5	209	Feb. 5, 1960	1.9	5.12	-	

a Average for 15-minute interval; computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

Note.--Figures of monthly and yearly outflow in cubic feet per second per square mile and runoff in inches, published in WSP 1503 for water year 1957, are subject to error due to possible losses in storage in subwatershed reservoir No. 11. Those figures are not published herein and should not be used.

1902. North Fork Broad River subwatershed No. 14
(tributary to Toms Creek) near Avalon, Ga.

Location.--Lat 34°30', long 83°13', at upstream edge of crown in earthfill dam on unnamed tributary to Toms Creek, 0.8 mile upstream from mouth and 1.6 miles southwest of Avalon, Stephens County.

Drainage area.--1.20 sq mi.

Records available.--October 1954 to September 1960.

Gage.--Water-stage recorder and V-notch sharp-crested weir on concrete drop inlet. Datum of gage is 735.33 ft above mean sea level, datum of 1929 (levels by Soil Conservation Service).

Average discharge.--6 years (1954-60), 1.61 cfs.

Extremes.--1954-60: Maximum outflow, 67 cfs Feb. 6, 1955 (gage height, 7.56 ft), from rating curve extended above 23 cfs on basis of theoretical rating for drop inlet spillway; no flow Dec. 24-28, 1954, Nov. 22-26, 1955, and May 9-11, 1960, caused by closing of reservoir drain valve. Maximum inflow, 628 cfs (average for 15-minute interval) July 5, 1956, computed from outflow and change in reservoir contents; negligible rainfall occurred on reservoir surface during time of peak inflow.

Remarks.--Reservoir is formed by earth dam; dam completed and storage began in October 1954. Outlet structure is a 3-foot square concrete drop inlet connected to a 30-inch concrete outlet pipe. An 18-inch orifice installed at the upstream end of the outlet pipe Nov. 21, 1955. A 120° V-notch sharp-crested weir is set on one side of the drop inlet, with notch at gage height 5.00 ft. Top of drop inlet is at gage height 5.75 ft, emergency spillway at gage height 22.2 ft. There is a 24-inch diameter cleanout gate at bottom of drop inlet at gage height -2.75 ft. Reservoir capacity at top of drop inlet, 23.6 acre-ft (revised). Capacity of emergency spillway level, 285 acre-ft (revised).

Monthly and annual mean outflow, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	0.417	0.771	1.13	1.12	2.49	1.32	1.23	0.865	0.834	1.04	0.768	0.457	1.03
1956	.530	.636	.644	.667	2.62	2.68	2.97	1.15	.762	3.26	.642	2.04	1.54
1957	.881	1.15	1.12	1.51	1.90	1.60	2.62	1.16	.950	1.19	.604	.748	1.28
1958	1.66	2.69	1.79	1.70	2.71	2.75	2.98	1.93	1.31	1.69	1.68	.954	1.98
1959	1.04	1.08	1.21	1.40	2.12	2.19	2.51	1.83	1.44	1.73	.958	2.00	1.61
1960	1.90	1.25	1.55	3.17	4.30	3.51	2.78	1.88	2.33	1.33	1.19	1.65	2.23

* Not previously published; estimated on basis of records for Toms Creek near Martin.

Contents, in acre-feet, at end of month, of reservoir No. 14

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	20.63	22.10	22.35	21.47	22.85	21.70	21.41	21.25	21.19	21.41	20.91	20.91	-
1956	20.97	20.46	21.13	21.25	22.28	21.75	21.87	21.36	20.85	21.53	20.91	21.70	-
1957	21.36	22.47	21.70	22.02	23.10	22.22	23.35	21.75	23.35	21.25	20.80	21.75	-
1958	21.53	22.53	22.10	22.60	23.35	23.35	22.66	22.04	21.41	21.66	21.60	21.41	-
1959	21.47	21.60	22.29	21.72	21.78	22.41	21.97	25.58	21.30	21.36	24.60	21.91	-
1960	22.16	21.72	21.85	23.66	22.78	23.47	22.97	22.03	22.10	21.72	21.78	22.10	-

Note.--Contents for period October 1955 to September 1959 are revised and supersede those published in water-supply papers.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year
		Maximum outflow		Maximum inflow		Minimum daily outflow	Mean outflow	Mean outflow
		Discharge	Date	Discharge	Date			
1950	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-
1955	1503	67	Feb. 6, 1955	a128	Feb. 6, 1955	0	1.03	0.985
1956	1503	30	Mar. 16, 1956	a628	July 5, 1956	0	1.54	1.66
1957	1503	28	Apr. 5, 1957	a166	July 24, 1957	.38	1.28	1.53
1958	1553	28	Aug. 24, 1958	b350	Aug. 24, 1958	.81	1.98	1.75
1959	1623	28	July 18, Sept. 7	b432	July 18, 1959	.73	1.61	1.73
1960	1703	29	Mar. 30, 1960	a274	Mar. 30, 1960	0	2.23	-

* Not previously published.

a Average for 15-minute interval; computed from outflow and change in reservoir contents, and adjusted for rainfall or reservoir surface during time of peak inflow.

b Average for 5-minute interval; computed from outflow and change in reservoir contents, and adjusted for rainfall on reservoir surface during time of peak inflow.

Note.--Figures published in WSP 1503 for November 1954 to September 1957, are subject to error due to possible losses in storage in subwatershed reservoir No. 14. Those figures are not published herein and should not be used.

1905. Toms Creek near Martin, Ga.

Location.--Lat 34°28', long 83°13', on left bank 30 ft downstream from highway bridge on county road, 1.2 miles upstream from mouth and 3 miles southwest of Martin, Stephens County.

Drainage area.--10.3 sq mi.

Records available.--June 1954 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 681.66 ft above mean sea level, datum of 1929 (levels by Soil Conservation Service).

Average discharge.--6 years (1954-60), 13.5 cfs.

Extremes.--1954-60: Maximum discharge, 726 cfs Mar. 16, 1956 (gage height, 8.41 ft); minimum, 1.2 cfs Aug. 14, Sept. 2, 1956, caused by storage in small flood-detention reservoir upstream.

Remarks.--The following table gives pertinent information on small flood-detention reservoirs which affected storm runoff at gage during short periods. This information supersedes that previously published in water-supply papers.

Number of reservoirs	Period in effect	Combined capacity, in acre-feet, at emergency spillway levels
2	Sept. 18, 1954, to July 12, 1956	476
3	July 13 to Oct. 16, 1956	1,390
4	Oct. 17, 1956, to Sept. 30, 1960	1,610

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	4.78	6.09	2.96	-
1955	2.79	6.03	10.9	13.3	24.3	12.6	12.3	7.66	5.64	8.50	6.01	2.77	9.31
1956	3.86	6.51	6.61	6.08	23.0	22.7	22.9	7.72	5.62	15.1	2.10	12.9	11.2
1957	5.64	9.61	10.6	15.4	17.9	16.5	25.6	9.59	9.03	6.94	4.74	8.20	11.6
1958	14.8	23.0	14.1	15.0	20.6	22.4	23.1	13.6	9.57	15.2	14.2	7.54	16.0
1959	9.75	8.61	10.5	12.2	17.5	20.5	22.9	16.7	14.4	14.8	6.6	14.5	14.0
1960	14.9	11.2	14.3	29.7	34.6	30.5	24.6	20.3	17.3	11.3	10.4	10.0	19.0

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	0.53	0.68	0.32	-
1955	0.31	0.65	1.22	1.49	2.46	1.41	1.33	0.86	0.61	0.95	0.67	0.30	12.26
1956	.43	.71	.74	.68	2.40	2.54	2.48	.86	.61	1.70	.24	1.40	14.79
1957	.63	1.04	1.19	1.73	1.81	1.84	2.78	1.07	.98	.78	.53	.89	15.27
1958	1.66	2.49	1.58	1.68	2.08	2.50	2.50	1.52	1.02	1.71	1.59	.82	21.15
1959	1.09	.93	1.18	1.36	1.77	2.29	2.48	1.87	1.56	1.66	.74	1.57	18.50
1960	1.67	1.22	1.60	3.32	3.62	3.41	2.67	2.27	1.87	1.27	1.16	1.08	25.16

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-
1955	1383	700	Feb. 6, 1955	2.0	9.31	0.904	12.26	9.07	11.96
1956	1433	726	Mar. 16, 1956	1.5	11.2	1.09	14.79	11.9	15.77
1957	1503	304	Apr. 5, 1957	2.2	11.6	1.13	15.27	13.8	18.14
1958	1553	278	Aug. 24, 1957	6.6	16.0	1.55	21.15	14.1	18.62
1959	1623	484	May 31, 1959	5.0	14.0	1.36	18.50	15.0	19.79
1960	1703	544	Mar. 30, 1960	6.4	19.0	1.84	25.16	-	-

1910. North Fork Broad River near Carnesville, Ga.

Location.--Lat 34°19', long 83°11', at bridge on State Highway 51, 1 mile downstream from Unawatt Creek, 3 miles upstream from confluence with Middle Fork Broad River, and 4½ miles southeast of Carnesville, Franklin County.

Drainage area.--119 sq mi.

Records available.--October 1942 to December 1944, April 1954 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 600.33 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Oct. 1, 1942, to Dec. 31, 1944, wire-weight gage at same site and datum.

Average discharge.--8 years (1942-44, 1954-60), 148 cfs.

Extremes.--1942-44, 1954-60: Maximum discharge, 3,400 cfs (revised), Jan. 18, 1943 (gage height, 7.6 ft, from graph based on gage readings); minimum, 16 cfs Oct. 5, 1954.

Remarks.--The following table gives pertinent information on small flood-detention reservoirs which affected storm runoff at gage during short periods. This information supersedes that previously published in water-supply papers.

Number of reservoirs	Period in effect	Combined capacity, in acre-feet, at emergency spillway levels
2	Sept. 18 to Oct. 26, 1954	476
3	Oct. 27, 1954, to Dec. 9, 1955	776
5	Dec. 10, 1955, to July 12, 1958	1,400
6	July 13 to Oct. 5, 1958	2,510
7	Oct. 6-16, 1958	3,170
8	Oct. 17, 1958, to Dec. 17, 1957	3,400
9	Dec. 18, 1957, to June 11, 1958	5,000
10	June 12, 1958, to May 19, 1959	5,550
11	May 20, 1959, to Sept. 30, 1960	5,710

Revisions.--The momentary maximum discharges for the water years 1943 and 1944 published in WSP 1303 have been revised to 3,400 and 2,670 cfs, respectively.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	23.4	57.6	100	137	216	127	122	72.7	60.7	55.3	38.8	22.9	90.1
1956	35.7	55.1	58.9	58.2	229	244	249	96.4	44.6	98.8	31.5	92.3	107
1957	59.0	89.2	104	144	166	171	249	92.1	78.4	63.2	36.7	63.7	109
1958	124	253	170	168	207	244	284	166	100	152	128	71.8	172
1959	83.0	79.5	99.9	138	207	188	200	134	171	108	59.4	144	134
1960	134	108	141	294	364	265	256	184	146	126	104	120	186

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	0.23	0.54	0.97	1.33	1.90	1.23	1.15	.70	.57	.80	.61	.27	10.30
1956	.35	.52	.57	.56	2.07	2.36	2.33	.93	.42	.96	.31	.87	12.25
1957	.57	.84	1.01	1.40	1.45	1.66	2.33	.89	.74	.61	.36	.60	12.46
1958	1.20	2.58	1.65	1.63	1.81	2.36	2.67	1.60	.94	1.48	1.24	.67	19.63
1959	.80	.75	.97	1.34	1.81	1.82	1.87	1.30	1.81	1.05	.58	1.35	15.25
1960	1.30	1.01	1.36	2.85	3.30	2.57	2.40	1.79	1.37	1.22	1.01	1.13	21.51

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-
1955	1383	1,800	Feb. 7, 1955	17	90.1	0.757	10.30	87.5	10.00
1956	1433	*2,760	Mar. 16, 1956	19	107	.899	12.25	116	13.23
1957	1503	2,080	Apr. 5, 1957	22	109	.916	12.46	134	15.27
1958	1553	1,950	Nov. 19, 1957	58	172	1.45	19.63	148	16.92
1959	1623	1,330	June 1, 1958	45	134	1.13	15.25	144	16.40
1960	1703	*2,670	Feb. 5, 1960	65	186	1.56	21.31	-	-

* Revised.

1912. Hudson River at Homer, Ga.

Location.--Lat 34°20'30", long 83°29'10", on downstream side of center pier of bridge on State Highway 15 at Homer, Banks County, 3.6 miles upstream from Webb Creek and 10.8 miles upstream from Grove Creek.

Drainage area.--46 sq mi, approximately.

Records available.--Annual maximum, water years 1951-59 and occasional low-flow measurements, 1942, 1950-52, 1954, 1955. June 1959 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 694.61 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 10, 1950, to June 19, 1959, crest-stage gage at site 60 ft downstream at same datum.

Extremes.--1950-60: Maximum gage height, 13.76 ft Mar. 4, 1952 (discharge not determined). 1959-60: Minimum discharge, 26 cfs Aug. 18, 20, 28, 29, 1959.
A discharge of 8.62 cfs was measured on Sept. 23, 1955.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	-	-	-	-	-	-	-	-	86.3	48.2	33.8	74.0	-
1960	83.7	54.7	63.1	147	202	183	152	100	67.8	96.6	62.8	64.4	106

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	-	-	-	-	-	-	-	-	2.10	1.21	0.85	1.80	-
1960	2.10	1.33	1.58	3.69	4.74	4.59	3.68	2.50	1.64	2.42	1.58	1.56	31.41

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	-	2,270	Oct. 20, 1950	-	-	-	-	-	-
1952	-	(a)	Mar. 4, 1952	-	-	-	-	-	-
1953	-	bl,250	Feb. 21, 1953	-	-	-	-	-	-
1954	-	3,170	Jan. 16, 1954	-	-	-	-	-	-
1955	-	1,840	Feb. 7, 1955	-	-	-	-	-	-
1956	-	1,420	Mar. 16, 1956	-	-	-	-	-	-
1957	-	1,290	Apr. 5, 1957	-	-	-	-	-	-
1958	-	792	Apr. 15, 1958	-	-	-	-	-	-
1959	1623	1,120	May 31, 1959	-	-	-	-	-	-
1960	1703	1,140	July 28, 1960	34	106	2.30	31.41	-	-

a Discharge not determined.

b Discharge estimated on basis of records for nearby stations.

Note.--Figures of maximum discharge for water years 1951, 1954-58, are from rating curve. Dates of maximum discharges for water years 1951-59 are the most probable dates, based on study of records for nearby stations and precipitation records.

SAVANNAH RIVER BASIN

1920. Broad River near Bell, Ga.

Location.--Lat 33°58', long 82°46', at downstream side of main channel pier of bridge on State Highway 17, half a mile downstream from Long Creek, 1 mile south of Bell's Cross-roads, and 12 miles southeast of Elberton, Elbert County.

Drainage area.--1,430 sq mi, approximately.

Records available.--October 1926 to September 1932, August 1937 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 357.16 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to October 1928, staff gage at railroad bridge about 1 mile downstream at datum 1.12 ft lower. October 1928 to July 1932 staff gage and August 1937 to January 1939 wire-weight gage, at present site and datum.

Average discharge.--29 years (1926-32, 1937-60), 1,653 cfs.

Extremes.--1926-32, 1937-60: Maximum discharge, 79,400 cfs Oct. 2, 1929 (gage height, 34.8 ft), from rating curve extended above 27,000 cfs on basis of slope-conveyance studies; minimum, 108 cfs Oct. 8, 1954.
Maximum stage known since at least 1926, that of Oct. 2, 1929.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,405	902	1,606	1,203	1,369	2,150	1,880	950	1,125	859	446	519	1,286
1952	456	685	2,950	1,655	2,093	8,356	2,017	1,215	853	622	910	493	1,863
1953	438	550	766	2,515	3,157	2,629	1,370	2,799	974	915	562	680	1,438
1954	570	623	2,542	3,095	1,261	1,624	1,612	983	675	471	291	158	1,162
1955	148	420	750	1,350	2,507	1,150	1,238	816	477	704	430	239	842
1956	288	410	455	506	2,254	2,709	3,169	858	396	608	264	890	1,059
1957	528	642	1,049	1,381	1,422	2,070	2,514	1,485	770	554	341	411	1,077
1958	1,442	2,887	1,907	1,941	2,606	3,288	3,552	1,651	958	1,137	803	502	1,883
1959	521	574	707	968	2,042	1,918	1,681	1,675	2,560	1,073	493	1,276	1,282
1960	1,509	926	1,187	3,461	5,555	3,019	2,670	1,460	911	957	709	722	1,909

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.94	0.70	1.29	0.97	1.00	1.73	1.46	0.77	0.88	0.69	0.36	0.40	12.19
1952	.37	.53	2.58	1.31	1.58	6.73	1.57	.98	.65	.50	.73	.38	17.71
1953	.35	.43	.62	2.03	2.30	2.12	1.07	2.26	.76	.74	.45	.53	13.66
1954	.46	.49	2.05	2.49	.92	1.31	1.26	.79	.53	.38	.23	.12	11.03
1955	.12	.33	.60	1.09	1.82	.93	.97	.66	.37	.57	.35	.19	8.00
1956	.23	.32	.37	.41	1.70	2.18	2.46	.69	.31	.49	.21	.69	10.06
1957	.43	.50	.85	1.11	1.04	1.67	1.81	1.20	.60	.43	.27	.32	10.23
1958	1.16	2.25	1.53	1.57	1.90	2.65	2.77	1.33	.75	.92	.65	.39	17.87
1959	.42	.45	.57	.78	1.54	1.54	1.32	1.35	2.00	.86	.40	.99	12.22
1960	1.22	.72	.96	2.79	4.17	2.43	2.09	1.18	.71	.77	.57	.56	18.17

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	1,345	12.76
1951	1203	22,900	Oct. 22, 1950	238	1,286	0.899	12.19	1,216	11.54
1952	1233	27,700	Mar. 5, 1952	375	1,863	1.30	17.71	1,666	15.83
1953	1273	12,500	Feb. 23, 1953	358	1,438	1.01	15.66	1,606	15.26
1954	1333	14,700	Jan. 18, 1954	118	1,162	.813	11.03	958	9.08
1955	1383	14,700	Feb. 8, 1955	110	842	.589	8.00	828	7.87
1956	1433	17,400	Mar. 18, 1956	128	1,059	.741	10.08	1,149	10.94
1957	1503	11,900	Apr. 7, 1957	165	1,077	.753	10.23	1,412	13.39
1958	1553	15,200	Apr. 17, 1958	419	1,683	1.32	17.87	1,512	14.37
1959	1623	16,800	June 2, 1959	381	1,282	.897	12.22	1,436	13.68
1960	1703	17,900	Feb. 1, 1960	452	1,909	1.33	18.17	-	-

1925. Little River near Mount Carmel, S. C.

Location.--Lat 34°04', long 82°30', on right bank 480 ft downstream from Island Ford Bridge, 2.8 miles upstream from Calhoun Creek, and 4.5 miles north of Mount Carmel, McCormick County.

Drainage area.--217 sq mi.

Records available.--December 1939 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 353.97 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--20 years (1940-60), 199 cfs.

Extremes.--1939-60: Maximum discharge, 20,800 cfs Aug. 14, 1940 (gage height, 29.60 ft, from high-water mark), from rating curve extended above 13,000 cfs by logarithmic plotting; minimum, 0.7 cfs Oct. 9, 1954.

Remarks.--Records of chemical analyses and water temperatures for the period October 1953 to September 1954 are published in report of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	108	81.3	151	124	187	240	244	86.9	125	67.5	58.1	38.2	125
1952	34.2	62.4	297	137	232	1,235	314	132	75.0	51.0	87.4	40.3	226
1953	35.1	45.6	70.7	297	472	503	153	399	65.5	51.9	39.0	109	185
1954	40.1	44.5	435	510	167	274	256	150	91.6	45.3	18.0	5.71	169
1955	4.49	27.3	71.3	169	463	159	168	141	55.1	71.0	47.0	17.9	114
1956	24.6	38.1	40.3	55.8	329	406	455	86.0	37.3	25.9	14.9	146	137
1957	53.0	52.8	112	138	149	310	243	138	77.1	36.7	13.4	24.1	112
1958	55.7	652	246	329	374	372	518	192	66.7	82.3	63.3	32.7	247
1959	30.0	40.1	55.7	101	226	219	190	147	184	101	33.3	384	141
1960	405	146	199	648	796	389	245	157	86.0	174	89.7	58.1	281

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.57	0.42	0.80	0.66	0.90	1.28	1.25	0.46	0.64	0.36	0.31	0.20	7.85
1952	.18	.32	1.58	.73	1.15	6.56	1.62	.70	.39	.27	.46	.21	14.17
1953	.19	.23	.38	1.58	2.27	2.68	.79	2.12	.34	.28	.21	.56	11.63
1954	.21	.23	2.31	2.71	.80	1.45	1.32	.69	.47	.24	.10	.03	10.56
1955	.02	.14	.38	.90	2.22	.85	.86	.75	.28	.38	.25	.09	7.12
1956	.13	.20	.21	.30	1.64	2.16	2.34	.46	.19	.14	.08	.75	8.60
1957	.28	.27	.59	.73	.72	1.65	1.25	.73	.40	.19	.07	.12	7.00
1958	.30	3.35	1.30	1.75	1.79	1.97	2.67	1.02	.34	.44	.34	.17	15.44
1959	.16	.21	.30	.54	1.08	1.16	.98	.78	.95	.54	.18	1.98	8.86
1960	2.16	.75	1.06	3.45	3.96	2.06	1.26	.83	.44	.92	.48	.30	17.67

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	124	7.74
1951	1203	1,440	Apr. 2, 1951	20	125	0.576	7.85	130	8.14
1952	1233	6,810	Mar. 4, 1952	24	226	1.04	14.17	205	12.89
1953	1273	2,970	May 1, 1953	17	185	.653	11.63	217	13.57
1954	1333	3,490	Jan. 17, 1954	2.4	169	.779	10.56	133	8.35
1955	1383	4,310	Feb. 7, 1955	1.0	114	.525	7.12	114	7.12
1956	1433	3,450	Mar. 17, 1956	2.8	137	.631	8.60	147	9.20
1957	1503	1,900	Apr. 5, 1957	2.9	112	.516	7.00	173	10.81
1958	1553	5,760	Nov. 19, 1957	21	247	1.14	15.44	178	11.16
1959	1623	5,400	Sept. 7, 1959	20	141	.650	8.86	194	12.16
1960	1703	4,500	Jan. 31, 1960	39	281	1.29	17.67	-	-

1935. Little River near Washington, Ga.

Location.--Lat 33°36'40", long 82°44'40", near left bank on downstream side of highway bridge pier, 700 ft downstream from Reedy Creek, 4 miles downstream from Georgia Railroad bridge, 6 miles upstream from Williams Creek, and 9 miles south of Washington, Wilkes County.

Drainage area.--291 sq mi.

Records available.--October 1949 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 360 ft (by barometer).

Average discharge.--11 years (1949-60), 218 cfs.

Extremes.--1949-60: Maximum discharge, 13,100 cfs Mar. 4, 1952 (gage height, 27.6 ft); minimum, 0.32 cfs Oct. 12-16, 1954.

Corrections.--In WSP 1303, the reference to the water-supply paper in which records for the water year 1950 are published is in error; it should be 1203.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	196	67.4	220	214	259	345	308	69.6	131	60.1	44.0	73.5	165
1952	32.5	95.2	403	269	374	1,959	289	109	62.5	29.5	40.6	37.4	308
1953	27.8	35.6	65.7	260	470	519	211	959	78.5	74.6	34.8	38.0	229
1954	34.0	36.7	271	250	175	192	120	135	38.9	25.6	10.7	1.72	107
1955	.435	12.8	37.7	270	317	129	235	167	47.6	124	93.8	25.1	121
1956	17.1	34.8	36.2	47.8	582	459	793	98.4	34.4	30.0	11.0	132	187
1957	38.1	31.8	271	296	169	522	265	522	100	41.0	35.1	67.3	198
1958	206	607	467	484	788	575	914	162	82.4	134	33.6	13.2	368
1959	14.7	27.5	45.4	96.0	478	353	174	151	357	57.1	21.0	20.1	162
1960	502	101	105	1,125	1,211	666	447	210	71.7	82.6	50.5	39.7	382

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.78	0.26	0.87	0.85	0.93	1.37	1.18	0.28	0.50	0.24	0.17	0.28	7.71
1952	.13	.56	1.59	1.07	1.39	7.68	1.11	.43	.24	.12	.16	.14	14.42
1953	.11	.14	2.56	1.03	1.69	2.05	.81	3.72	.30	.30	.14	.15	10.70
1954	.13	.14	1.07	.99	.63	.76	.46	.53	.15	.10	.04	.007	5.01
1955	.002	.05	.15	1.07	1.14	.51	.90	.66	.18	.49	.37	.10	5.64
1956	.07	.13	.14	.19	2.16	1.82	3.05	.39	.13	.12	.04	.51	8.75
1957	.15	.12	1.07	1.18	.60	2.06	1.02	2.06	.38	.16	.14	.28	9.20
1958	.82	2.33	1.84	1.91	2.82	2.28	5.50	.64	.32	.53	.13	.05	17.17
1959	.06	.11	.18	.38	1.71	1.40	.67	.60	1.37	.23	.08	.77	7.56
1960	1.99	.39	.42	4.45	4.49	2.64	1.72	.83	.27	.33	.20	.15	17.88

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1203	2,160	Oct. 22, 1950	10	165	0.567	7.71	157	7.53
1952	1233	13,100	Mar. 4, 1952	15	308	1.06	14.42	169	7.88
1953	1273	9,880	May 1, 1953	14	229	.787	10.70	247	11.53
1954	1333	1,500	Feb. 21, 1954	.46	107	.368	5.01	82.8	3.87
1955	1383	2,280	Feb. 8, 1955	.52	121	.416	5.64	124	5.76
1956	1433	5,680	Apr. 12, 1956	3.7	187	.643	8.75	208	9.75
1957	1503	3,480	Mar. 26, 1957	9.0	198	.680	9.20	276	12.85
1958	1553	9,220	Apr. 17, 1958	9.2	368	1.26	17.17	269	12.53
1959	1623	3,140	June 3, 1959	8.9	162	.557	7.56	214	10.01
1960	1703	7,910	Jan. 31, 1960	22	382	1.31	17.88	-	-

1940. Little River near Lincolnton, Ga.

Location.--Lat 33°39', long 82°29', near center of span on downstream side of Raysville Bridge on State Highway 43, half a mile downstream from Big Creek, 2½ miles south of Amity, and 10 miles south of Lincolnton, Lincoln County.

Drainage area.--574 sq mi.

Records available.--January 1943 to March 1951.

Gage.--Wire-weight gage. Datum of gage is 271.7 ft above mean sea level (unadjusted).

Average discharge.--7 years (1943-50), 512 cfs.

Extremes.--1943-51: Maximum discharge, 16,900 cfs Mar. 23, 1944 (gage height, 26.4 ft); minimum observed, 14 cfs Oct. 12, 1944
Maximum stage known since at least 1928, 44.3 ft Sept. 28, 1929, from information furnished by local resident (discharge, 54,000 cfs, from slope-conveyance study at peak stage).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	258	109	389	353	467	676	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.52	0.21	0.78	0.71	0.85	1.36	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	-	-	-
1951	1203	2,090	Feb. 8, 1951	-	-	-	-	266	6.30	-	-

1945. Clark Hill Reservoir near Clarks Hill, S. C.

Location.--Lat 33°39'40", long 82°12'00", in left spillway elevator tower of dam on Savannah River, 1.6 miles west of Clarks Hill, McCormick County, 3.7 miles upstream from Kiokee Creek, and at mile 222.3 upstream from Savannah, Ga.

Drainage area.--6,150 sq mi, approximately.

Records available.--October 1951 to September 1952 (elevations and contents at end of month), October 1952 to September 1960.

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers). Prior to Oct. 1, 1952, staff gage at same site and datum.

Extremes.--1952-60: Maximum contents, 70,570,000,000 cu ft June 5, 1959 (elevation, 333.59 ft); minimum, 11,850,000,000 cu ft below normal limit of drawdown Feb. 1, 1956 (elevation, 296.48 ft).

Remarks.--Lake is formed by concrete dam with earth dam at each end; dam completed in 1952. Storage began in December 1951. Usable capacity, 75,360,000,000 cu ft between elevations 305.0 ft (normal limit of drawdown) and 335.0 ft (top of spillway gates). Dead storage below 305.0 ft, 50,960,000 cu ft. Figures given herein represent usable contents. Elevation of spillway crest, 300.0 ft. Water is used for flood control, generation of power, and navigation.

Contents, in billions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	-	-	-	-	-	-	-	-	-	-	-	-
1952	-50.75	-50.32	-35.95	-34.36	-19.17	12.46	-7.66	-5.04	-2.52	-2.81	0	-1.33
1953	-3.58	-6.07	-3.84	14.01	42.97	53.77	58.54	57.85	56.33	53.43	45.62	36.77
1954	25.25	16.58	30.89	55.87	58.54	59.59	56.82	54.25	49.34	40.09	29.97	18.59
1955	6.16	-3.20	-4.93	1.59	18.04	18.87	25.32	28.27	23.71	24.08	19.73	12.36
1956	5.36	-1.08	-7.67	-11.70	8.22	28.38	56.20	53.16	46.02	40.43	30.45	28.90
1957	22.83	16.97	17.56	21.72	30.53	46.48	59.97	58.10	56.75	48.12	38.34	31.26
1958	33.87	54.22	53.00	52.58	57.09	61.50	60.72	58.22	54.65	55.47	48.16	40.48
1959	33.38	27.29	22.81	22.33	31.57	41.53	51.60	59.66	57.49	55.29	44.44	45.05
1960	49.04	36.98	33.45	52.09	56.91	59.97	57.58	56.85	55.75	54.88	49.07	44.65

Note.--Figures of contents prior to January 1953 not previously published. Negative figures indicate water surface was below normal limit of drawdown.

1950. Savannah River near Clarks Hill, S. C.

Location.--Lat 33°38'40", long 82°12'05", on right bank 1.2 miles downstream from Clark Hill Reservoir dam, 2.4 miles southwest of Clarks Hill, McCormick County, 2.5 miles upstream from Kiokee Creek, and at mile 221.1 upstream from Savannah, Ga.

Drainage area.--6,150 sq mi, approximately.

Records available.--May 1940 to June 1954.

Gage.--Water-stage recorder. Datum of gage is 182.69 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers). Auxiliary water-stage recorder 6.3 miles downstream from base gage.

Average discharge.--13 years (1940-53), 8,479 cfs.

Extremes.--1940-54: Maximum discharge, 196,000 cfs Aug. 14, 1940 (gage height, 29.34 ft); minimum daily, 1,120 cfs June 11, 1941.

Remarks.--Prior to December 1951 some regulation by Burton and Mathis Reservoirs and powerplants above station. Since December 1951 flow completely regulated by Clark Hill Reservoir.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	4,076	4,316	23,420	6,674	-
1941	2,716	5,515	7,021	6,876	4,588	9,137	6,315	3,404	4,535	13,680	4,921	2,559	5,964
1942	2,284	2,561	9,565	6,549	11,520	20,680	7,373	7,766	5,451	5,147	6,493	4,724	7,496
1943	3,823	4,010	10,510	22,210	12,180	15,980	12,930	8,048	6,687	12,240	6,041	4,626	9,953
1944	3,565	4,357	5,813	9,005	15,470	27,900	16,520	9,051	5,591	4,374	3,980	3,628	9,055
1945	3,592	3,396	4,595	5,524	11,950	9,180	11,790	6,602	4,277	5,007	4,732	7,018	6,474
1946	3,872	4,464	13,930	23,330	19,150	14,760	13,420	12,130	6,865	5,294	5,156	3,722	10,470
1947	6,453	5,286	4,769	19,060	8,034	13,030	12,190	5,716	5,560	4,060	3,685	3,072	7,582
1948	4,581	16,810	10,940	8,639	22,680	19,990	14,340	7,634	6,150	9,614	7,633	6,261	11,220
1949	4,526	21,960	17,830	16,380	20,830	11,810	13,590	16,560	11,390	13,610	10,880	12,750	14,280
1950	9,328	9,018	8,008	8,868	8,495	10,380	7,219	5,630	7,233	6,585	4,222	7,797	7,740
1951	8,064	4,839	7,762	5,975	6,684	8,781	10,310	6,412	5,824	4,189	3,239	3,184	6,271
1952	2,471	4,019	7,986	7,957	4,724	24,770	20,110	6,309	3,961	3,347	3,495	3,261	7,715
1953	3,344	3,943	3,653	3,605	4,009	10,110	5,847	13,760	5,544	5,335	5,544	7,114	6,004
1954	7,073	6,508	6,255	5,916	6,929	8,867	10,650	6,721	6,313	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	1503	-	-	-	-	-	-	-	-
1941	1503	54,900	July 8, 1941	1,120	5,964	0.970	13.16	5,900	13.03
1942	1503	99,300	Mar. 23, 1942	1,450	7,496	1.22	15.54	7,826	17.27
1943	1503	111,000	Jan. 20, 1943	1,530	9,953	1.62	21.97	9,544	21.06
1944	1503	111,000	Mar. 21, 1944	1,930	9,055	1.47	20.04	8,941	19.79
1945	1503	61,200	Apr. 26, 1945	1,800	6,474	1.05	14.29	7,330	16.19
1946	1503	110,000	Jan. 8, 1946	2,460	10,470	1.70	23.13	9,981	22.03
1947	1503	87,000	Jan. 21, 1947	1,960	7,582	1.23	16.73	8,897	19.63
1948	1503	63,600	Feb. 10, 1948	2,200	11,220	1.82	24.82	12,220	27.03
1949	1503	154,000	Nov. 30, 1948	2,920	14,280	2.32	31.51	12,790	28.23
1950	1503	36,800	Oct. 9, 1949	2,570	7,740	1.26	17.08	7,268	16.03
1951	1503	48,700	Oct. 22, 1950	1,390	6,271	1.02	13.86	5,747	12.71
1952	1503	35,400	Mar. 7, 1952	1,830	7,715	1.25	17.09	7,416	16.43
1953	1503	30,000	May 7, 1953	2,740	6,004	.976	13.26	6,753	14.92
1954	1503	-	-	-	-	-	-	-	-

1960. Stevens Creek near Modoc, S. C.

Location.--Lat 33°43'45", long 82°10'55", on left bank at bridge on State Highway 23, 1.4 miles east of Modoc, McCormick County, and 3.2 miles downstream from Turkey Creek.

Drainage area.--545 sq mi.

Records available.--November 1929 to September 1931, February 1940 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 197.34 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Southeastern Power Administration). Oct. 15, 1929, to Sept. 30, 1931, staff gage at site 1,100 ft upstream at different datum.

Average discharge.--21 years (1930-31, 1940-60), 365 cfs.

Extremes.--1929-31, 1940-60: Maximum discharge, 35,100 cfs Aug. 14, 1940; maximum gage height, 41.08 ft Aug. 14, 1940; no flow Sept. 14, 15, Sept. 24 to Nov. 16, Nov. 22, 1954.

Remarks.--Slight diurnal fluctuation during low flow caused by small mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	87.3	38.5	192	215	290	512	563	43.6	97.1	50.7	25.2	54.7	180
1952	9.86	39.1	368	349	611	2,380	496	81.9	55.1	80.6	152	33.2	389
1953	9.92	18.0	50.0	345	946	768	319	817	68.0	64.1	19.8	69.3	288
1954	12.1	11.0	377	418	191	215	314	62.3	67.0	61.2	17.6	1.05	146
1955	0	1.29	15.1	231	559	189	718	272	30.8	148	105	68.6	192
1956	13.9	13.7	16.0	24.9	402	641	820	79.4	16.0	25.5	20.6	287	195
1957	31.0	15.0	153	235	157	828	329	725	68.2	69.5	115	44.0	233
1958	308	778	546	691	1,237	726	1,688	219	59.1	358	37.0	6.16	548
1959	4.16	4.48	27.9	106	719	690	348	69.9	282	252	27.9	486	247
1960	1,045	205	180	2,263	2,623	1,507	756	184	61.7	133	40.8	51.7	749

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.18	0.08	0.41	0.45	0.55	1.08	1.15	0.09	0.20	0.11	0.05	0.11	4.46
1952	.02	.08	.78	.74	1.21	5.04	1.02	.17	.11	.17	.32	.07	9.73
1953	.02	.04	.11	.73	1.81	1.63	.65	1.73	.14	.14	.04	.14	7.18
1954	.03	.02	.80	.88	.36	.45	.64	.13	.14	.13	.04	.002	3.62
1955	0	.003	.03	.49	1.07	.40	1.47	.58	.06	.31	.22	.14	4.77
1956	.03	.03	.03	.05	.80	1.36	1.67	.17	.03	.05	.04	.59	4.85
1957	.07	.03	.32	.50	.30	1.75	.67	1.53	.14	.15	.24	.09	5.79
1958	.65	1.60	1.15	1.46	2.36	1.53	3.46	.46	.12	.76	.08	.01	13.64
1959	.009	.009	.06	.22	1.38	1.46	.71	.15	.58	.53	.06	1.00	6.17
1960	2.21	.42	.38	4.78	5.19	3.19	1.55	.39	.13	.28	.09	.11	18.72

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1950	-	-	-	-	-	-	-	-	-	167	4.15
1951	1203	6,760	Apr. 3, 1951	1.4	180	0.330	4.46	188	4.67		
1952	1233	18,200	Mar. 5, 1952	3.8	389	.714	9.73	361	9.02		
1953	1273	8,360	Feb. 15, 1953	1.6	288	.528	7.18	315	7.86		
1954	1353	4,110	Jan. 16, 1954	0	146	.268	3.62	113	2.80		
1955	1383	11,300	Apr. 15, 1955	0	192	.352	4.77	194	4.83		
1956	1433	9,430	Apr. 12, 1956	.4	195	.358	4.85	208	5.18		
1957	1503	7,330	May 5, 1957	2.1	233	.428	5.79	352	8.77		
1958	1553	15,900	Apr. 16, 1958	2.5	548	1.01	13.64	415	10.32		
1959	1623	87,600	Mar. 6, 1959	.4	247	.453	6.17	365	9.10		
1960	1703	16,100	Jan. 31, 1960	11	749	1.37	18.72	-	-		

a Maximum peak discharge; maximum discharge during year, 9,620 cfs at 12 p.m. Sept. 30, stage rising.

1965. Augusta Canal near Augusta, Ga.

Location.--Lat 33°30'50", long 82°00'15", on left bank 2.7 miles northwest of Thirteenth Street Bridge in Augusta, Richmond County, and 4.6 miles downstream from Stevens Creek power dam.

Records available.--November 1930 to September 1957.

Gage.--Water-stage recorder. Datum of gage is 46.58 ft above city of Augusta datum or 148.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Auxiliary water-stage recorder 3.4 miles upstream from base gage.

Average discharge.--26 years (1931-57), 2,737 cfs.

Extremes.--1930-57: Maximum daily discharge, 4,380 cfs Jan. 2, 28, 1948; no flow Apr. 8 to May 10, 1936.

Remarks.--Canal diverts water from Savannah River for power and municipal supply at dam 1 mile downstream from Stevens Creek Dam. Waste water from powerhouses is returned to river below station by three channels above Thirteenth Street Bridge, and a small amount entering Beaverdam ditch is discharged into river about 13 miles below Augusta. Water diverted from canal for municipal supply of Augusta and for operation of pumps is included in these records.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,033	3,312	3,294	3,486	3,513	3,576	3,411	3,490	3,409	2,780	2,585	2,284	3,181
1952	1,923	2,792	2,859	3,281	3,158	3,014	3,263	2,954	2,879	2,438	2,709	2,433	2,806
1953	2,620	2,849	2,748	2,961	3,080	3,214	2,970	3,258	3,206	3,068	2,928	3,027	2,993
1954	3,175	3,070	2,879	2,602	2,641	2,604	2,554	2,461	2,605	2,471	2,840	2,637	2,712
1955	2,713	2,804	2,446	2,584	2,624	2,698	2,695	2,765	2,839	2,339	2,871	2,743	2,676
1956	2,913	2,993	2,866	2,960	2,890	2,876	2,892	2,706	2,447	2,462	2,730	2,469	2,766
1957	2,712	2,683	2,475	2,780	2,788	2,745	2,801	2,752	2,628	2,610	2,916	2,779	2,738
1958	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

1970. Savannah River at Augusta, Ga.

Location.--Lat 33°22'25", long 81°56'35", at New Savannah Bluff lock and dam, 0.2 mile upstream from Butler Creek, 12 miles downstream from Augusta, Richmond County, and at mile 188.2 upstream from Savannah.

Drainage area.--7,508 sq mi, including that of Butler Creek.

Records available.--October 1883 to December 1891, January 1896 to December 1906, January 1925 to September 1960. Monthly discharge only for some periods, published in WSP 1303. Gage-height records collected at site of Fifth Street gage since 1875 and at New Savannah Bluff lock and dam sites since 1937 are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 96.58 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (Corps of Engineers bench mark). Oct. 1, 1883, to Dec. 31, 1891, Jan. 1, 1896, to Dec. 31, 1906, Jan. 1, 1925, to Sept. 30, 1932, staff gage or water-stage recorder at Fifth Street Bridge at datum 102.06 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Southeastern Engineering Co.). Oct. 1, 1932, to Sept. 30, 1936, water-stage recorder at Thirteenth Street Bridge at datum 104.56 ft above mean sea level (levels by Corps of Engineers). Oct. 1, 1936, to Nov. 10, 1948, water-stage recorder at site 0.2 mile downstream from present site and at present datum.

Average discharge.--53 years (1883-91, 1896-1906, 1925-60), 10,160 cfs.

Extremes.--1883-91, 1896-1906, 1925-60: Maximum discharge, 350,000 cfs Oct. 3, 1929; maximum gage height, 46.3 ft Sept. 27, 1929 (at site and datum then in use); minimum discharge, 648 cfs Sept. 24, 1939, from rating curve extended below 1,400 cfs; minimum daily, 1,040 cfs Oct. 2, 1927.

Maximum flood known occurred in 1796, discharge, 360,000 cfs (gage height, 40 ft, marked by local residents, at site and datum of Fifth Street gage) by conveyance-slope study.

Remarks.--Flow regulated by Stevens Creek powerplant and New Savannah Bluff lock and dam, and since December 1951 by Clark Hill Reservoir.

Correction.--In WSP 1303, in the table of monthly and yearly mean discharge, the footnote symbol "b" appears beside the figure for the wrong year. It should appear in the year column on the line for 1932 (*b9,627).

Monthly and yearly mean discharge, in cubic feet per second, of Savannah River at Augusta, Ga.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	8,541	5,166	8,319	6,581	7,451	9,764	11,440	6,580	5,963	4,570	3,465	3,389	6,786
1952	2,728	4,196	8,662	8,654	5,642	29,030	21,810	6,782	4,342	3,627	3,889	3,332	8,596
1953	3,365	4,017	3,751	4,084	5,889	11,390	8,460	15,150	5,778	5,750	5,898	7,232	6,561
1954	7,172	6,498	7,115	7,247	7,269	9,420	11,460	7,306	6,575	6,230	5,677	5,584	7,293
1955	5,818	5,846	4,982	4,600	5,278	5,767	7,119	5,804	5,227	5,206	5,226	4,995	5,487
1956	4,976	5,076	5,150	4,418	4,661	5,668	6,171	6,031	5,425	5,266	5,547	6,189	5,398
1957	5,437	5,622	5,962	6,105	5,988	6,772	8,225	9,802	6,138	6,143	6,171	6,452	6,572
1958	7,347	9,310	13,130	12,780	14,030	15,120	23,520	12,260	6,609	8,796	7,855	8,879	11,360
1959	5,722	5,675	5,763	6,026	7,395	7,322	6,721	5,781	13,060	6,613	7,070	8,559	7,125
1960	12,680	12,400	9,298	15,070	28,480	18,660	18,020	9,029	6,267	6,414	7,344	6,538	12,450

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	7,691	13.92
1951	1203	46,300	Oct. 22, 1950	1,710	6,766	0.901	12.23	6,222	-
1952	1233	39,300	Mar. 6, 1952	1,770	8,596	-	-	8,221	-
1953	1273	35,200	May 8, 1953	3,260	8,561	-	-	7,372	-
1954	1333	25,500	Mar. 30, 1954	5,460	7,293	-	-	6,944	-
1955	1383	23,900	Apr. 15, 1955	4,180	5,487	-	-	5,367	-
1956	1433	18,600	Apr. 12, 1956	3,580	5,398	-	-	5,550	-
1957	1503	18,000	May 7, 1957	5,170	6,572	-	-	7,646	-
1958	1553	66,300	Apr. 18, 1958	5,000	11,360	-	-	10,300	-
1959	1623	28,500	June 8, 1959	5,260	7,125	-	-	8,569	-
1960	1703	34,900	Feb. 14, 1960	5,350	12,450	-	-	-	-

1975. Savannah River at Burtons Ferry Bridge, near Millhaven, Ga.

Location.--Lat 32°56'20", long 81°30'10", on downstream side of left pier of drawspan of bridge on U.S. Highway 301, 2 miles downstream from Rocky Creek, 9 miles east of Millhaven, Screven County, and at mile 114.5 upstream from Savannah.

Drainage area.--8,650 sq mi, approximately.

Records available.--October 1939 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 52.42 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers).

Average discharge.--21 years (1939-60), 9,999 cfs.

Extremes.--1939-60: Maximum discharge, 141,000 cfs Aug. 18, 1940 (gage height, 27.0 ft); minimum daily, 2,120 cfs Sept. 9, 1951.

Flood in October 1929 reached a stage of 30.8 ft, from information by Corps of Engineers (discharge, 220,000 cfs, from rating curve extended above 141,000 cfs by logarithmic plotting).

Remarks.--Considerable regulation by Stevens Creek powerplant and New Savannah Bluff lock and dam and since December 1951, by Clark Hill Reservoir. Records of water temperatures for the period January 1956 to September 1960 are published in reports of the Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	8,696	6,109	8,339	7,864	8,425	10,550	12,750	7,483	6,615	5,233	4,147	3,861	7,550
1952	3,598	5,095	8,658	9,916	7,315	28,710	26,820	8,170	4,705	4,178	4,628	4,091	9,648
1953	4,074	4,813	4,677	5,650	7,137	13,350	8,969	16,640	6,878	6,571	6,314	8,059	7,773
1954	7,910	7,320	8,412	8,609	8,011	9,425	12,660	7,786	6,591	6,422	5,844	5,742	7,892
1955	5,880	6,198	5,524	5,594	6,256	6,401	8,094	6,531	5,648	5,604	5,630	5,523	6,052
1956	5,233	5,579	5,859	5,067	6,192	7,343	7,745	7,098	5,942	5,531	5,890	6,665	6,175
1957	5,842	5,887	6,528	6,522	6,820	7,753	8,958	10,450	7,001	6,497	6,433	7,137	7,154
1958	8,660	8,769	14,550	13,660	15,280	16,660	24,310	13,980	7,559	9,066	8,178	5,881	12,190
1959	5,811	6,080	6,394	6,972	9,057	8,823	7,847	6,365	13,990	7,128	7,198	9,130	7,875
1960	14,250	15,650	10,750	15,610	32,440	24,520	23,490	11,250	7,593	7,535	8,249	7,261	14,800

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.16	0.79	1.19	1.05	1.01	1.41	1.64	1.00	0.85	0.70	0.55	0.50	11.85

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	8,764	13.77
1951	1203	25,700	Oct. 27, 1950	2,120	7,550	0.873	11.85	7,010	-
1952	1233	38,500	Mar. 29, 1952	2,550	9,648	-	-	9,328	-
1953	1273	31,800	May 13, 14, 1953	3,850	7,773	-	-	8,622	-
1954	1333	17,600	Apr. 6, 1954	5,500	7,892	-	-	7,382	-
1955	1383	15,000	Apr. 18, 1955	4,770	6,052	-	-	5,974	-
1956	1433	13,700	Mar. 19, 1956	4,590	6,175	-	-	6,309	-
1957	1503	13,900	Apr. 14, May 11	5,500	7,154	-	-	8,312	-
1958	1553	41,400	Apr. 22, 1958	5,500	12,190	-	-	11,040	-
1959	1623	27,400	June 13, 1959	5,500	7,875	-	-	9,748	-
1960	1703	37,100	Feb. 17, 1960	6,440	14,800	-	-	-	-

SAVANNAH RIVER BASIN

1975.5. Little Brier Creek near Thomson, Ga.

Location.--Lat 33°20'24", long 82°27'29", on left bank at downstream side of bridge on State Highway 17, 0.5 mile above mouth and 9 miles south of Thomson, McDuffie County.

Drainage area.--24 sq mi, approximately.

Records available.--Annual maximum, water years 1952-60 and occasional low-flow measurements 1950-52, 1954, 1958, 1959. June to September 1960.

Gage.--Water-stage recorder. Datum of gage is 313.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Georgia State Highway Department). July 11, 1950, to June 24, 1960, crest-stage gage at same site and datum.

Extremes.--1951-60: Maximum discharge, 981 cfs Mar. 4, 1952 (gage height, 8.53 ft). 1960: Minimum discharge during period June to September 1960, 3.0 cfs Sept. 14. Maximum stage known, about 14 ft in 1929, from information furnished by Georgia State Highway Department. A discharge of 0.242 cfs was measured on Sept. 7, 1951.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	-	-	-	-	-	-	-	-	-	10.6	7.28	4.75	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	-	-	-	-	-	-	-	-	-	0.51	0.35	0.22	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date a/						
1950	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-
1952	-	981	Mar. 4, 1952	-	-	-	-	-	-
1953	-	505	Sept. 27, 1953	-	-	-	-	-	-
1954	-	216	Jan. 16, 1954	-	-	-	-	-	-
1955	-	550	April 1955	-	-	-	-	-	-
1956	-	445	Mar. 16, 1956	-	-	-	-	-	-
1957	-	279	June 1957	-	-	-	-	-	-
1958	-	848	Apr. 16, 1958	-	-	-	-	-	-
1959	-	450	May 1959	-	-	-	-	-	-
1960	1703	796	January 1960	-	-	-	-	-	-

a Most probable date, based on study of records for nearby stations and precipitation records.

1976. Brushy Creek near Wrens, Ga.

Location.--Lat 33°10'40", long 82°18'20", at right bank on downstream side of bridge on State Highway 80, 5 miles southeast of Wrens, Jefferson County, and 5½ miles above Little Brushy Creek.

Drainage area.--28.0 sq mi.

Records available.--May 1958 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 282.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Georgia State Highway Department).

Extremes.--1958-60: Maximum discharge, 752 cfs Mar. 30, 1960 (gage height, 7.28 ft); minimum, 7.2 cfs July 5, 1960.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	-	-	19.1	37.3	14.6	12.1	-
1959	10.9	13.6	17.0	16.4	35.6	46.0	28.1	15.4	18.6	17.9	11.2	25.7	21.3
1960	62.3	30.8	27.4	61.6	96.7	69.9	70.8	26.5	22.3	20.5	16.6	16.1	43.3

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	-	-	0.76	1.53	0.60	0.48	-
1959	0.45	0.54	0.70	0.68	1.32	1.89	1.12	0.63	.74	.46	1.02	1.02	10.29
1960	2.56	1.23	1.13	2.54	3.72	2.88	2.82	1.09	.89	.84	.68	.64	21.02

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1958	1623	-	-	11	-	-	-	-	-
1959	1623	425	Mar. 6, 1959	7.8	21.3	0.761	10.29	27.9	13.52
1960	1703	752	Mar. 30, 1960	8.4	43.3	1.55	21.02	-	-

1980. Brier Creek at Millhaven, Ga.

Location.--Lat 32°56'00", long 81°39'05", near right bank on downstream side of pier of highway bridge at Millhaven, Screven County, 8½ miles upstream from Beaver Dam Creek.

Drainage area.--646 sq mi.

Records available.--October 1936 to September 1960. Monthly discharge only for some periods, published in WSP 1303.

Gage.--Water-stage recorder. Datum of gage is 95.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 7, 1950, staff gage at site 200 ft downstream at same datum. June 7, 1950, to Apr. 30, 1951, wire-weight gage at present site and datum.

Average discharge.--24 years (1936-60), 642 cfs.

Extremes.--1936-60: Maximum discharge, 25,400 cfs Aug. 16, 1940 (gage height, 17.4 ft, from graph based on gage readings); minimum daily, 64 cfs Sept. 5-11, 1954.

Maximum stage known since at least 1797, 25.1 ft in September or October 1929, from information by Georgia State Highway Department (discharge, 64,000 cfs, by slope-conveyance study).

Remarks.--Slight diurnal fluctuation at low flow caused by gristmills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	301	321	473	588	552	715	688	236	288	181	249	252	403
1952	218	425	543	505	744	1,648	814	433	314	211	236	260	529
1953	245	319	415	698	986	1,340	585	1,029	324	300	229	254	559
1954	422	300	888	824	548	610	553	332	220	165	94.9	102	422
1955	116	203	331	484	579	471	933	640	321	509	320	401	441
1956	236	272	388	335	805	1,135	898	434	189	158	159	208	433
1957	328	234	348	463	537	675	631	529	391	236	200	272	403
1958	843	718	1,212	941	1,074	1,368	1,617	698	385	562	214	184	817
1959	199	233	358	529	1,191	1,203	976	363	462	294	218	491	538
1960	1,130	940	842	992	2,709	1,787	2,280	711	571	475	402	302	1,087

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.54	0.55	0.84	1.05	0.89	1.28	1.19	0.42	0.50	0.32	0.44	0.44	8.46
1952	.39	.73	.97	.90	1.24	2.94	1.41	.77	.54	.38	.42	.45	11.14
1953	.44	.55	.74	1.24	1.59	2.39	1.01	1.83	.56	.53	.41	.44	11.73
1954	.75	.52	1.58	1.48	.88	1.09	.96	.59	.38	.29	.17	.18	8.87
1955	.21	.35	.59	.86	.93	.84	1.61	1.14	.55	.91	.57	.69	9.25
1956	.42	.47	.69	.60	1.35	2.03	1.55	.77	.33	.28	.28	.36	9.13
1957	.59	.40	.62	.83	.87	1.20	1.09	.94	.68	.42	.36	.47	8.47
1958	1.50	1.24	2.17	1.68	1.73	2.44	2.79	1.24	.86	1.00	.38	.32	17.15
1959	.36	.40	.64	.94	1.92	2.14	1.68	.65	.80	.52	.39	.85	11.29
1960	2.02	1.63	1.50	1.78	4.52	3.19	3.94	1.27	.99	.85	.72	.52	22.93

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1203	1,060	Mar. 21, 1951	117	403	0.624	8.46	408	8.56
1952	1233	4,200	Mar. 9, 1952	136	529	.819	11.14	512	10.78
1953	1273	3,140	May 9, 1953	154	559	.865	11.73	612	12.85
1954	1333	1,560	Dec. 20, 1953	64	422	.653	8.87	341	7.17
1955	1383	3,220	Apr. 20, 1955	104	441	.683	9.25	462	9.68
1956	1433,1503	2,900	Mar. 22, 1956	107	433	.670	9.13	435	9.16
1957	1503	1,140	Apr. 1, 1957	111	403	.624	8.47	560	11.77
1958	1553	4,440	Apr. 21, 1958	146	817	1.26	17.15	650	13.64
1959	1623	2,340	Mar. 12, 1959	154	538	.833	11.29	716	15.04
1960	1703	9,300	Apr. 8, 1960	248	1,087	1.68	22.93	-	-

1985. Savannah River near Clyo, Ga.

Location.--Lat 32°31'30", long 81°15'45", on downstream side of center pier of drawspan of Bridge on Seaboard Air Line Railroad, 3 miles north of Clyo, Effingham County, and at mile 50.1 upstream from Savannah.

Drainage area.--9,850 sq mi, approximately.

Records available.--October 1929 to September 1933, October 1937 to September 1960.

Monthly discharge only for some periods, published in WSP 1303. Gage-height records collected at same site 1921-43 by U.S. Weather Bureau (unpublished prior to 1933).

Gage.--Water-stage recorder. Datum of gage is 13.41 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Jan. 31, 1933, staff gage at same site and at datum 4.00 ft higher. Jan. 31, 1933, to June 12, 1945, staff gage at same site and datum.

Average discharge.--27 years (1929-33, 1937-60), 11,290 cfs.

Extremes.--1929-33, 1937-60: Maximum discharge, 270,000 cfs Oct. 6, 1929 (gage height, 29.7 ft, present datum, from information by Corps of Engineers), from rating curve extended above 120,000 cfs by logarithmic plotting; minimum daily, 1,950 cfs Sept. 27, 1931.

Remarks.--Considerable regulation by Stevens Creek powerplant and New Savannah Bluff lock and dam above station and, since December 1951, by Clark Hill Reservoir.

Correction.--In WSP 1303, the momentary maximum discharge for 1930 was not given; it was later determined to be 270,000 cfs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	8,080	8,253	9,456	9,156	9,259	11,080	14,050	8,288	6,783	5,737	4,793	4,209	8,253
1952	4,207	5,869	8,742	11,590	8,907	27,930	31,150	10,040	5,836	4,635	5,019	4,500	10,700
1953	4,776	5,330	5,258	6,547	8,321	16,130	11,540	19,160	7,511	6,698	6,556	8,196	8,762
1954	9,262	7,899	9,841	9,814	8,484	10,880	14,120	8,950	7,089	6,646	5,960	5,893	8,738
1955	5,919	6,470	6,075	6,347	7,318	7,049	9,750	7,209	6,307	6,232	6,248	6,570	6,782
1956	5,824	6,217	6,776	5,853	7,483	9,142	9,938	7,892	6,287	6,015	6,325	6,897	6,975
1957	6,918	6,617	7,309	7,585	7,735	8,519	10,130	11,980	8,119	6,923	6,679	7,619	8,012
1958	10,220	8,609	17,160	15,370	18,670	19,540	27,590	17,310	8,492	9,977	8,645	6,353	13,970
1959	6,028	6,207	6,844	7,992	11,880	12,080	9,964	6,771	14,070	7,813	7,963	9,826	8,917
1960	14,400	19,280	12,340	15,960	34,460	29,470	27,130	13,500	8,239	8,072	9,083	7,573	16,540

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.95	0.94	1.11	1.07	0.98	1.29	1.60	0.97	0.77	0.67	0.56	0.48	11.39

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	-	-	-	-	-	-	-	-	-	13.08
1951	1203	22,600	Nov. 1, 1950	2,860	8,253	0.838	11.39	9,484	7,668	-
1952	1233	41,300	Apr. 2, 1952	3,140	10,700	-	-	10,410	-	-
1953	1273	35,800	May 17, 1953	4,410	8,762	-	-	9,743	-	-
1954	1333	18,800	Apr. 12, 1954	5,760	8,738	-	-	8,017	-	-
1955	1383	15,500	Apr. 23, 1955	5,310	6,782	-	-	6,812	-	-
1956	1433	14,100	Mar. 22, 1956	5,400	6,975	-	-	7,145	-	-
1957	1503	15,000	May 15, 1957	5,760	8,012	-	-	9,293	-	-
1958	1553	45,500	Apr. 25, 1958	5,960	13,970	-	-	12,540	-	-
1959	1623	26,000	June 18, 1959	5,760	8,917	-	-	11,570	-	-
1960	1703	40,900	Feb. 19, 1960	6,810	16,540	-	-	-	-	-

Published herewith are revisions and corrections for records published in WSP 1303 for stations discontinued prior to Sept. 30, 1950.

1090. Middle Swamp near Elkton, N.C.

Drainage area.--6.02 sq mi (revised).

1210. Yadkin River near Salisbury, N.C.

Correction.--In WSP 1303, some figures for June 1898 and the yearly totals are listed in error; they should be as given herewith:

Month	Discharge		Runoff in inches
	Mean	Per square mile	
June 1898.....	2,038	-	0.66
Water year 1897-98.....	3,646	1.05	14.26
Calendar year 1898.....	3,764	-	14.73

1285. Big Mountain Creek near Ellerbe, N.C.

Drainage area.--34.9 sq mi (revised).

1295. North Fork Jones Creek near Wadesboro, N.C.

Drainage area.--9.43 sq mi (revised).

1404.9. Wilson Creek near Adako, N.C.

Drainage area.--65.0 sq mi (revised).

1410. Johns River near Morganton, N.C.

Drainage area.--209 sq mi (revised).

1655. Saluda River near Waterloo, S.C.

Correction.--In WSP 1303 the column in the third table headed "Momentary maximum" should be headed "Maximum daily".

1830. Tugaloo River near Madison, S.C.

Gage (corrected).--Staff gage. Datum of gage is 630.10 ft above mean sea level. July 19, 1898, to Jan. 17, 1902, staff gage at site $1\frac{1}{2}$ miles downstream at different datum.

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